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ZABABDEH: A PALESTINIAN WATER HISTORY

by

Julia S. Templin

A thesis submitted in partial fulfillment
of the requirements for the degree

of

MASTER OF SCIENCE

in

History

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UTAH STATE UNIVERSITY
Logan, Utah

2011

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Abstract

Zababdeh: A Palestinian Water History

by

Julia S. Templin, Master of Science

Utah State University, 2011

Major Professor: Dr. Christopher Conte

Department: History

This study explores the historical evolution of the water situation in Palestine at a local level in the West Bank village of Zababdeh. The thesis examines Palestine's geography and the historical relationship of Zababdeh's people with this environment. A sudden shift in this relationship took place during the second half of the 20th century, particularly after the advent of Israeli occupation. The thesis also addresses the Palestinians' involvement, or lack thereof, in water politics of the West Bank during the 20th century. The pattern of neglect has left Palestinians in a weak position to secure safe and reliable water supplies for villages like Zababdeh. Though some have speculated that the water situation in Palestine will one day lead to violent conflict, the example of Zababdeh's water history shows that such conflict has not yet occurred because the village's inhabitants experienced many new water-related conveniences under Israeli occupation. The new conveniences left Zababdeh's people relatively contented and without incentive to fight over water. The study finds that water is an underlying, and sometimes overt stress that has been exacerbating the conflict in Palestine for decades and will continue to foster

instability in the region until the people of Palestine all have safe, consistent, and sufficient supplies of water for their needs.

(125 pages)

To the people of Zababdeh, with hope for your peaceful future.

Acknowledgments

This thesis is the product of much more than merely a few years of research in a graduate program. The seeds for this work were planted over ten years ago when, as an impressionable young teenager who left the US essentially for the first time, I became familiar with some of the struggles of Palestinians. Ultimately they, the Palestinian people, are the ones I have most to recognize and thank for influencing my work. The kindness and friendship shown to me by so many Palestinians prompted my desire to learn more about the conflict and hardships they endure every day and my wish that those hardships can be overcome.

Specifically I would like to thank Joseph and his family, whose friendship to my family during the year we lived in Zababdeh was invaluable. He also was instrumental to my research by assisting me in several of my interviews and always checking on me to make sure I had everything I needed. Equally important was Jameel, who not only spent hours interpreting my interviews but has also been a wonderful friend during the ten years I have known him.

I also appreciate the patience of all my interviewees, both from Zababdeh and elsewhere, who so tirelessly answered all my questions, no matter how odd they seemed. Particularly I must thank Ihab Bargouthi of the Palestinian Water Authority, whose information and advice helped me better contextualize Zababdeh's water story. Zaki Saleh also provided information and assistance about the water problem in Palestine as a whole so I could better interpret my interviews.

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I would like to thank Monica Ingold and Diane Buist in the USU History Department for helping me juggle all the paperwork and other technicalities we history majors are often too scatterbrained to handle on our own. I also appreciate the friendship of all my fellow history graduate students over the past few years. Especially, thanks for putting up with my stacks of books and newspapers that I'm sure drove you all crazy. Thanks to each of the professors in the History Department with whom I have worked as a graduate assistant: Dr. Alice Chapman, Dr. Eric Kimball, Dr. Daniel McInerney, and especially Dr. Sue Shapiro, who was a wonderful teacher and friend to me.

Finally, I want to thank my family for all their love and support. The seeds for my education were planted in a home where learning and understanding were valued and encouraged. I respect and admire each of my siblings and their spouses who have all been wonderful examples to me in their pursuits of higher education. I owe a great debt to my parents who taught me to write, to think critically, and to care about others. Without these tools, I could not have attempted to research and write about the topic I have in this thesis.

Above all I would like to thank my husband, Josh. He unquestioningly supported me in my education and all other aspects of my life. He and our son

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Julia S Templin

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Acronyms

JSET	Joint Supervision and Enforcement Teams
JWC	Joint Water Committee
MCM	million cubic meters
OPT	Occupied Palestinian Territories
PA	Palestinian Authority
PWA	Palestinian Water Authority
TVA	Tennessee Valley Authority
UN	United Nations
UNISPAL	United Nations Information System on the Question of Palestine
UNRWA	United Nations Relief Works Agency
WBWD	West Bank Water Department

Chapter 1

Introduction: The Problem of Water in Palestine

Problem

I first became aware of the problem of water in Palestine when I was fifteen years old, living with my family in Zababdeh, West Bank. We could turn on a pump to refill our rooftop tank with water from the cistern below our house. Sometimes we forgot about the pump until water spilled over the edge of the tank. The eight-year-old son of our downstairs neighbor would come running up to our door, pointing at the roof and saying “water, water.” I had never thought before about where the water running through the tap came from, let alone what would happen if it stopped coming. For my neighbor, though, and everyone else in Zababdeh, this was a daily concern.

This thesis tells the story of the inhabitants of the village of Zababdeh, in relation to their water. The Palestinian village lies within the West Bank governorate of Jenin, the area that has recently become the Palestinian heartland.¹ One of the few predominantly Christian communities in the West Bank,² Zababdeh is in many ways very unique. It also typifies rural Palestine as a small, remote

¹Since Israeli occupation of the West Bank in 1967, Israeli settlements and roads have carved the Palestinian territory into isolated sections of Palestinian settlement. The Jenin governorate holds the most contiguous strings of Palestinian communities in the territory and is now considered the most viable center for a Palestinian state.

²The CIA World Factbook reports the following statistics on religion in the West Bank: Muslim 75% (predominantly Sunni), Jewish 17%, Christian and other 8%. Central Intelligence Agency, “The World Factbook,” URL: <https://www.cia.gov/library/publications/the-world-factbook/> (accessed Oct. 22, 2010), located in “The West Bank,” under “People.”

village in the mountains. The geographical unavailability of water and the inhabitants' historical usage of and access to the resource is not unlike many other Palestinian communities in the region.

The water history of Zababdeh falls within the broader discussion of the Palestinian-Israeli conflict and the role of water in that fiery and prolonged struggle that spanned the entire 20th century and beyond. The center of the Palestinian-Israeli conflict is fundamentally a question of land. The refugee problem, the status of Jerusalem, borders, and other obstacles to resolving the conflict tie back to rights to the land. Inseparably connected to the land dispute is the debate over water resources, who owns them, who has rights to use them, and how they should be managed. Of all the issues driving the Palestinian-Israeli conflict, water is perhaps the most important since it is a vital resource for survival, and it may yet prove to be one of the most difficult issues to resolve.

Research Statement

While Palestine, and particularly the modern conflict there, is a popular topic for research and debate, very few scholarly works focus specifically on the history of the Palestinian people. The rural inhabitants of the West Bank mountain region in particular have largely remained faceless and voiceless through history. This study aims to fill in a small section of that enormous gap. Like the seminal work of Beshara Doumani, my thesis is an attempt at “writing Palestinians into history.”³

The thesis further aims to explain the recent prominence of water as an issue in the Palestinian-Israeli conflict by examining the history of the resource in Zababdeh. Although water in the Palestinian-Israeli conflict has been studied in

³Beshara B. Doumani, “Rediscovering Ottoman Palestine: Writing Palestinians into History,” *Journal of Palestine Studies* 21, no. 2 (1992): 5–28, URL: <http://www.jstor.org/stable/2537216> (accessed Oct. 18, 2010); See also Beshara Doumani, *Rediscovering Palestine: Merchants and Peasants in Jabal Nablus, 1700-1900* (Berkeley, CA: University of California Press, 1995).

some depth from political and technical perspectives, a historical perspective is lacking. This study shows the historical evolution of the water situation in Palestine at a local level in the little village. Although Zababdeh is only one small community, the village's history contributes to an overall understanding of why the water issue has increasingly become a tense and emotional problem for the Palestinian people in recent years.

The story of Zababdeh illustrates the frustration of many Palestinians with their water situation. The 20th century saw drastic changes to their lifestyles, particularly the ways in which the village's inhabitants accessed and used water. These changes were accompanied by consistent failure of governments in the West Bank to provide clean and consistent supplies of water to Zababdeh. Moreover, under Israeli occupation, people in Zababdeh found themselves restricted from improving their quality of life themselves, not because of the unavailability of technology or their lack of ingenuity, but because of Israeli control over their water resources. Water is a crucial issue in the Palestinian-Israeli conflict because it is a daily concern that creates stress and tension for many Palestinians who do not have access to an adequate supply of the vital resource. Without responding to Palestinians' right to this basic human need, the conflict will only intensify and the lives of the Palestinian people cannot improve.

Literature Review

The schools of thought on water in the Palestinian-Israeli conflict deal primarily with the question of whether water scarcity leads to conflict or cooperation. Many studies address this issue in the Middle East in general and feature the water resources of Palestine prominently. One study by Thomas Naff and Ruth Matson poses the question of conflict or cooperation for several different rivers in the Middle

East, including the Jordan River that borders Palestine. Naff and Matson's study takes a very balanced view: "It is unlikely that water tensions alone will soon lead to major military encounters among the Jordan [River] riparians. Water tensions, however, may greatly aggravate the conflict once it is sparked by other interests."⁴ The authors also note that water often engenders cooperation, perhaps because the parties involved recognize the issue's volatility.⁵ In the case of the Jordan River, they find that tensions will likely increase over time, but the involved parties will attempt to ease these tensions through cooperation, as Jordan and Israel did through their 1994 peace treaty.⁶

Naff and Matson make a typical assumption that the parties involved in the regional water dispute are the countries of Israel and Jordan. As is common in studies predating the Palestinian-Israeli negotiations of the 1990s, the Palestinians, as a stateless people, are not considered significant actors in the situation. The study focuses on the waters of the Jordan River, but cannot neglect noting the role of the West Bank and its underground water resources in the regional dispute. What the authors fail to adequately assess is the potential role of the Palestinian inhabitants in conflict or cooperation over the territory's water.

Other authors argue along similar lines that water in the Middle East, and particularly in Palestine, can either lead to violent conflict or act as a forum for cooperative measures. Bolstered by predictions like that of former United Nations Secretary General Boutros Boutros Ghali that "the next war in our region will be over the waters of the Nile,"⁷ or former Egyptian President Anwar Sadat asserting

⁴Thomas Naff and Ruth C. Matson, eds., *Water in the Middle East: Conflict or Cooperation?* (London: Westview Press, 1984), 57.

⁵*Ibid.*, 3.

⁶*Ibid.*, 61.

⁷Quoted in Jon Barnett, "Destabilizing the Environment-Conflict Thesis," *Review of International Studies* 26, no. 2 (April 2000), URL: <http://www.jstor.org/stable/20097674> (accessed Oct. 18, 2010): 276.

that “the only matter that could take Egypt to war again is water,”⁸ some authors warn of an impending possibility for water wars. John Cooley, Joyce Starr, and Hussein Amery each treat the potential for such wars as, in Amery’s words, “a looming threat.”⁹

The wars that the articles seem to predict, however, have yet to materialize. Cooley suggests that Israel ought to publicly declare that it does not plan diversion of Arab rivers (the Litani, Orontes, or others) as a bare minimum to head off a water war. Starr warned that a water crisis could erupt after the end of the Gulf War. Amery does not actually predict a future water war, but describes how a situation that developed between Israel and Lebanon almost became a water war. None of these scenarios featured by the authors translate to any actual violent conflict over water resources in the region.

The general absence of violent conflict over water has led critics to suggest that the theory’s authors fail to clearly define some of the language used in their discourse (i.e., a definition of “conflict”) and contend that water wars are a myth.¹⁰ Barnett asserts that “the argument about water wars is overstated, is a particular product of strategic rationality, and undervalues the historical and contemporary evidence that water is as likely to ‘cement peace’ as it is to induce violence.”¹¹

Barnett specifically critiques Starr and Cooley who, in their articles, encourage the US to alter its role in Middle East water politics. The very nature of these articles is strategic, which is probably why they were published in *Foreign Policy*.

⁸Joyce R. Starr, “Water Wars,” *Foreign Policy* 82 (Spring 1991): 17–36, URL: <http://www.jstor.org/stable/1148639> (accessed Oct. 18, 2010).

⁹John K. Cooley, “The War over Water,” *Foreign Policy*, no. 54 (Spring 1984), URL: <http://www.jstor.org/stable/1148352> (accessed Oct. 18, 2010): 16; Starr, see n. 8, 17–36; Hussein A. Amery, “Water Wars in the Middle East: A Looming Threat,” *The Geographical Journal* 168, no. 4 (December 2002), URL: <http://www.jstor.org/stable/3451474> (accessed Oct. 18, 2010): 314.

¹⁰See Juha I. Uitto and Aaron T. Wolf, “Water Wars? Geographical Perspectives: Introduction,” *The Geographical Journal* 168, no. 4 (December 2002), URL: <http://www.jstor.org/stable/3451472> (accessed Oct. 18, 2010): 289; Barnett, see n. 7, 276.

¹¹Barnett, see n. 7, 276.

Barnett's disapproval of their "strategic rationality" seems founded on differences in epistemology rather than factual errors. A clear misinterpretation lies in Barnett's belief that the water war thesis neglects the possibility of using water to establish peace. Starr and Cooley each noted the importance of water issues in peace negotiations, but even more, they warned of the volatility of the water situation and *potential* violence in hopes that such conflict might be averted.

The fact that water wars are not typical in the water-scarce Middle East bolsters the argument of those who advocate water as an opportunity for cooperation. Munther Haddadin reviews the history of water plans and negotiations in the region around Palestine and contends that water "can never cause a war." Rather, he uses the example of the peace agreement between Israel and Jordan in 1994 to show that water can be a conduit for peace. While water relations in the region are best between Israel and Jordan, Haddadin believes that other parties can reach solutions to their water disagreements.¹²

Aaron Wolf combats the idea that water causes wars through his search for instances where water was the driver of interstate violence. Citing thousands of water treaties in comparison to virtually no "water wars," the author determines that water issues lend themselves better to cooperation than conflict.¹³

A critic of both the water conflict and water cooperation theories, Jan Selby argues that water is a matter of political economy.¹⁴ He downplays the importance of water in Middle East interstate conflicts, rejecting typical examples like

¹²Munther J. Haddadin, "Water in the Middle East Peace Process," *The Geographical Journal* 168, no. 4 (December 2002), URL: <http://www.jstor.org/stable/3451475> (accessed Oct. 18, 2010): 337.

¹³A. Wolf, "Conflict and cooperation along international waterways," *Water Policy* 1, no. 2 (1998), URL: <http://www.sciencedirect.com/science/article/B6VHR-3VXY5MH-R/2/5f0a480b4ec90d81f008fdb3f77e746e> (accessed Oct. 18, 2010): 289.

¹⁴Jan Selby, "The Geopolitics of Water in the Middle East: Fantasies and Realities," *Third World Quarterly* 26, no. 2 (March 2005): 329–349, URL: <http://www.jstor.org/stable/3993731> (accessed Oct. 18, 2010).

arguments that the 1967 Six Day War was motivated by water. Similarly, he believes water does not lead peace making, but falls within existing peace talks as an issue of only minor importance. While he finds water insignificant at an interstate level, the author claims that water plays a much larger role in local politics. The conditions of poor water quality and uncertain supplies, according to Selby, often lead to fierce competition for water supplies locally.

Seif Da'na also addresses water in terms of political economy in one of the few studies directly concerned with history and water in the Palestinian-Israeli conflict.¹⁵ His dissertation is not a history of water in the conflict, but is about the writing of the conflict's history and argues that water illustrates the "real cause" of the conflict: class struggle. He critiques the historiography of the conflict and argues that the traditional nationalist narratives ignore this real cause. By applying a political-economic approach to the case of water control and distribution, he claims that inequality, demonstrated by the inequitable distribution of water, drives the Palestinian-Israeli conflict.

Da'na explains the principle of inequitable distribution of resources by ascribing it to a class struggle between "ethnic" Palestinians and Israelis.¹⁶ Although we may justifiably divide Palestinians and Israelis into separate social classes as Da'na does, such a simplistic division along national lines ignores the existing class systems that might better inform his study. Within the groups of Palestinians and Israelis are many levels of society in varying circumstances. Selby acknowledges this fact in

¹⁵Seifdeen Nathmy Da'na, "The Political Economy and Ecology of Water: A Contribution to Rewrite the History of the Arab-Israeli Struggle" (PhD diss., Kansas State University, 2000). Da'na refers to the conflict as an Arab-Israeli struggle because, first, Palestinians are Arabs, and second, the establishment of the state of Israel created the conditions for conflict with neighboring Arab countries (see p. 16). Although *Arab-Israeli conflict* and *Palestinian-Israeli conflict* are often used interchangeably, the two conflicts are fundamentally different, as I explain in the "Background" section of this introduction. The conflict Da'na addresses takes place between Palestinians and Israelis, so I replace his reference to the "Arab-Israeli" struggle or conflict with "Palestinian-Israeli."

¹⁶Ibid., 28.

terms of water supply and demand patterns in the West Bank, which “vary not only between Israeli settlements and Palestinian towns and villages, but also between and even within Palestinian communities.”¹⁷ In the case of water, for instance, rural Palestinians are generally more likely to live in a home not connected to a water network than urban Palestinians. His general division of the masses ignores the value of understanding smaller-scale experiences of communities and individuals.

Moreover, the author’s assertion that inequality embodies the Palestinian-Israeli struggle is again overly simplistic.¹⁸ Certainly inequality plays a role in the struggle. Obvious tension over the water consumption gap between Palestinians and Israelis has only further complicated the conflict. But conflict as a representation of class inequality, as Da’na argues all forms of struggle are,¹⁹ would suggest that the party in the inferior situation would have the motivation to struggle for change and therefore be the aggressor. It is just as possible, though, that the party in the better situation, or even parties in a situation of equality, might find their situation still inadequate and initiate conflict to improve it. The presence of class inequality is not a precondition for struggle or conflict, nor is it necessarily present in all struggles.

The primary contribution of Da’na’s work to the study of water in the Palestinian-Israeli conflict is that it addresses the water issue as critical to the overall understanding of the conflict. Water is not the only important issue in the conflict, but its resolution is a necessary step to the resolution of the conflict as a whole.

¹⁷Selby, see n. 14, 343.

¹⁸Da’na, see n. 15, 22.

¹⁹Ibid.

Study Area and Nomenclature

This study concerns the Palestinian people, and Palestine is the anglicized version of *Filastin*, their current name for the area, so it is the name I have chosen to use.²⁰ Palestine is bounded on the north by Lebanon, the east by Jordan, the south by the Sinai Peninsula of Egypt, and the west by the Mediterranean Sea, as shown in figure 1.1. The area corresponds to that of the British Mandate for Palestine, the time period in which this study commences.²¹ After the termination of the Mandate in 1948, part of the territory became the State of Israel, while Jordan (then still called Transjordan) and Egypt took control of the remaining territories of the West Bank and Gaza Strip, respectively. During the Arab-Israeli war of 1967, the Six Day War, Israel acquired these two territories and occupied them.²² The two areas collectively are now usually referred to as the Occupied Palestinian Territories (OPT).

While this thesis generally deals with conflict in Palestine as a whole, specific focus is placed on the mountainous West Bank territory. The village of Zababdeh in the Jenin governorate of the northern West Bank (see figure 1.2) provides a case study for the water history of West Bank Palestinians in this rural, mountainous region.

²⁰For a discussion on the history of Palestine's name, see Bernard Lewis, "Palestine: On the History and Geography of a Name," *The International History Review* 2, no. 1 (January 1980): 1–12, URL: <http://www.jstor.org/stable/40105058> (accessed Oct. 18, 2010).

²¹I refer here to the British Mandate excluding Transjordan, which separated from the Mandate for Palestine in 1921.

²²Israel also occupied the Sinai Peninsula, an Egyptian territory, and the Golan Heights, from Syria. Over a decade later, Israel returned the Sinai to Egypt in a peace treaty. The Golan was annexed to Israel shortly afterwards, but since it was not part of Mandate Palestine, nor considered by Palestinians as part of their homeland, it does not fall within the borders of Palestine in this study.



Fig. 1.1: Map of Palestine

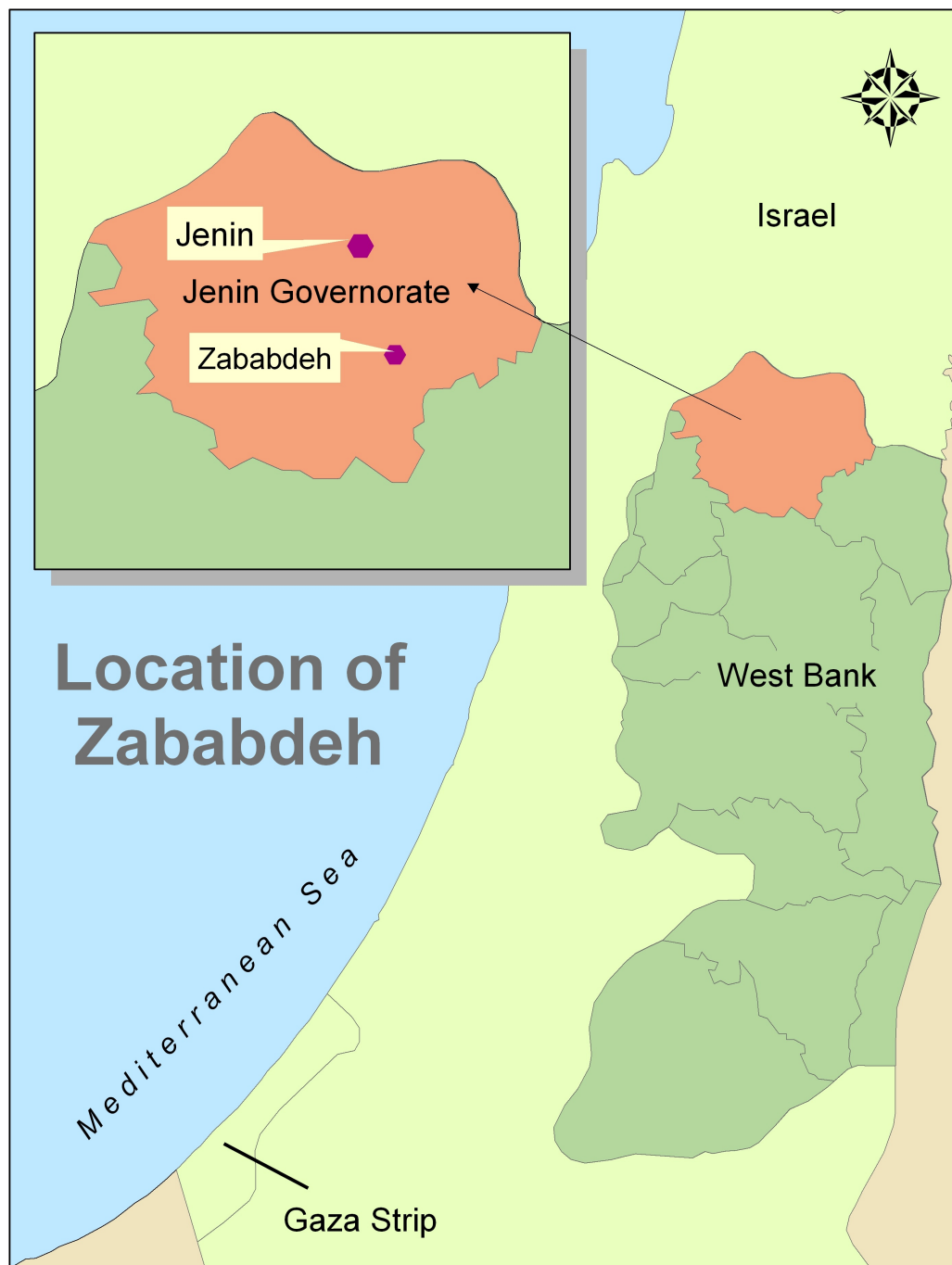


Fig. 1.2: Zababdeh, in the Jenin governorate of the West Bank

Background on the Palestinian-Israeli Conflict

The thesis of Zababdeh's water history is set within the context of the Palestinian-Israeli conflict. The conflict differs from the related Arab-Israeli conflict in that the latter incorporates several Arab states in the region and their wars and disputes with Israel, while the Palestinian-Israeli conflict specifically addresses the issues between Palestinians and Israelis. Both conflicts cite similar origins and for many years followed the same path. The Palestinian-Israeli Conflict, though, shifts focus from the inter-state conflict in the Middle East to the mostly localized struggle between a stateless people and an occupying power.

Origins of the conflict between Palestinians and Israelis typically date to the late 1800s. Palestine made up a small portion of the Ottoman Empire that controlled most of the Middle East from the 16th century until the end of World War I in 1918. The small strip of land was a "poor and neglected part of the Ottoman Empire."²³ Essentially, the region, receiving little attention from the empire, became disorderly, and the people there were left to fend for themselves under the corrupt and inconsistent local governance.

To some degree, the inattentiveness of the Ottomans allowed the people of Palestine to continue practicing their established traditions of land ownership and use,²⁴ and they even enjoyed "full civil and political rights equally with Ottoman citizens."²⁵ However, because of the empire's disconnect with situations in Palestine, it could, and sometimes did, violate local traditions of ownership by confiscating and redistributing lands and evicting the peasant Arabs who worked them.²⁶

²³Ian J. Bickerton and Carla L. Klausner, *A Concise History of the Arab-Israeli Conflict*, updated 4th ed. (Upper Saddle River, NJ: Pearson Prentice Hall, 2005).

²⁴For a discussion of such traditions within the Palestinian economy during the Ottoman Empire, see Doumani, *Rediscovering Palestine: Merchants and Peasants in Jabal Nablus, 1700-1900*, see n. 3.

²⁵Henry Cattán, *The Palestine Question* (London: Saqi Books, 2000), 8.

²⁶Rosemary Sayigh, *Palestinians: From Peasants to Revolutionaries* (London: Zed Press, 1979), 37.

Toward the end of Ottoman rule in the late 19th century, Zionism, a movement to establish a home for the Jewish people in Palestine,²⁷ picked up momentum. As anti-Semitism flourished in Europe, many Jews looked to their ancient homeland for refuge. Between the years 1882 and 1903, 25,000 Jews immigrated to Palestine in the first *aliyah*.²⁸

Although Jews had maintained a constant presence in Palestine since antiquity, the resurgence of immigration around 1900 created a tense atmosphere. As Zionists arrived, they regularly purchased land from “absentee land owners,” landlords who had acquired their holdings during the Ottoman Land Reforms of the mid-1800s, but often lived in cities far from the land. In fact, more than fifty percent of the Zionists’ land purchased was from large absentee owners, while less than ten percent was from the *fellaheen*, the Arab peasants who worked the land.²⁹

The situation was shortly aggravated by the events of World War I and the British administration in Palestine during the years after the war. The British government made contradictory promises to both Jewish and Arab leaders during the war. The Balfour Declaration, a letter from the British Cabinet sent to Baron Lionel Rothschild in 1917, expressed Britain’s favour of “the establishment in Palestine of a national home for the Jewish people”³⁰ while the Husain-McMahon Correspondence, consisting of two letters and several oral messages relayed by representatives of Sir Henry MacMahon and Sharif Husain between 1915 and 1916,

²⁷This definition of Zionism is the declared Zionist purpose according to the Basel Declaration, a document constructed at the First Zionist Congress, held in Basel, Switzerland in 1897. See “The Basel Program, 1897,” in Charles L. Geddes, ed., *A Documentary History of the Arab-Israeli Conflict* (New York: Praeger, 1991).

²⁸Howard M. Sachar, *A History of Israel: From the Rise of Zionism to Our Time*, 2nd ed. (New York: Alfred A. Knopf, Inc, 1996), 26. The term *aliyah*, as defined in Bickerton and Klausner, see n. 23, 26, literally means “going up,” and is used to refer to the waves of Jewish immigration to “the Land of Israel,” or to Palestine.

²⁹Sayigh, see n. 26, 37.

³⁰United Kingdom Foreign Office, “Balfour Declaration,” 2 November 1917, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/e210ca73e38d9e1d052565fa00705c61?OpenDocument&Highlight=2,balfour> (accessed Jan. 18, 2010).

emphasized Britain's desire for Arab independence and establishment of a caliphate in the Arab lands.³¹

After the fall of the Ottoman Empire and the end of the war, the League of Nations orchestrated the Mandate system. Article 22 of the Covenant of the League of Nations charged "advanced nations" with the tutelage of "peoples not yet able to stand by themselves under the strenuous conditions of the modern world." The system provided for three types of mandates, A, B, and C, with varying degrees of control and administration. The former Ottoman territories, type A, received the least oversight. They were deemed developed enough to warrant only "the rendering of administrative advice and assistance" by a European power.³²

Palestine thus fell under British administration, along with the territories that are now Jordan and Iraq. After five years of military administration, the British Mandate for Palestine was formally ratified in 1922. The document of the mandate, as well as the 1922 White Paper, a British policy statement issued earlier that year, affirmed support for the Zionist program of establishing a homeland in Palestine.³³

During this time under the British Mandate, conflict among the Jews, Arabs, and the British continued to escalate. Violence erupted in 1929 over Jewish rights to worship at Jerusalem's Western, or Wailing Wall located on Arab *waqf* land.³⁴ The incident set off a series of investigations, reports, and policy statements. Zionist outcry at the documents that suggested limiting Jewish immigration to Palestine

³¹"Husain-McMahon Correspondence" in Geddes, see n. 27, 23-28.

³²League of Nations, "The Covenant Of The League Of Nations," 28 April 1919, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/6cb59816195e58350525654f007624bf?OpenDocument> (accessed Jan. 18, 2010).

³³United Kingdom, "The Churchill White Paper," 3 June 1922, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/f2ca0ee62b5680ed852570c000591beb?OpenDocument> (accessed Jan. 18, 2010).

³⁴Michael J. Cohen, *The Origins and Evolution of the Arab-Zionist Conflict* (Berkeley, CA: University of California Press, 1989), 84. *Waqf* lands are Islamic religious endowments for charitable or religious purposes.

led the British Prime Minister to issue a letter reversing that policy, to the outrage of Arabs.³⁵

The tension climaxed with a protracted Arab insurgency against the British control and, even more so, continued Jewish immigration. The Arab Rebellion of 1936-1939 prompted another British investigation and policy statement. The Peel Commission, deeming the overall situation irrepressible, recommended for the first time partitioning the land of Palestine into two states, Arab and Jewish.³⁶ The policy statement issued two years later, the 1939 White Paper, ignored recommendations of the Peel Commission and called for limitation and eventual cessation of Jewish immigration, in addition to the creation of a “united independent Palestine state,” unifying all peoples of the land.³⁷ This paper was vehemently opposed by both Arabs and Jews.

As the situation in Palestine became increasingly difficult, Britain eventually turned the problem over to the post-World War II replacement for the League of Nations, the United Nations (UN). In 1947, the UN General Assembly passed Resolution 181, known as the UN Partition Plan.³⁸ The plan called for two separate states, a Palestinian one and a Jewish one, and the internationalization of Jerusalem.

Arab leaders vehemently rejected the plan. The Jews, however, proclaimed their state immediately following the end of the British Mandate on May 14, 1948. The

³⁵Bickerton and Klausner, see n. 23, 52-53; Cohen, see n. 34, 88-89. Some of these documents included the John Hope-Simpson Report and Passfield White Paper, followed by the MacDonald Letter.

³⁶United Kingdom, “Palestine Royal Commission Report,” 1937, CMD.5479, Online, URL: <http://unispal.un.org/pdfs/Cmd5479.pdf> (accessed Jan. 18, 2010).

³⁷United Kingdom, “Palestine Statement of Policy,” May 1939, Cmd. 6019, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/eb5b88c94aba2ae585256d0b00555536?OpenDocument> (accessed Jan. 18, 2010).

³⁸United Nations General Assembly, “Future government of Palestine,” 29 November 1947, A/RES/181(II), in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/5ba47a5c6cef541b802563e000493b8c/7f0af2bd897689b785256c330061d253?OpenDocument> (accessed Jan. 18, 2010).

following day, the armies of neighboring Arab countries, Egypt, Syria, Lebanon, Transjordan (now Jordan), and Iraq, attacked the new Jewish state of Israel. After a year of fighting, Israel was not only successful in defending its partitioned territory from the coordinated attack of the surrounding Arab countries but also gained and annexed additional territory that had been intended for the Arab state in Palestine. The remaining areas for the planned Arab state, the West Bank and Gaza Strip, fell under the control of Jordan and Egypt, respectively. Nearly a million Arab inhabitants of the area that became Israel fled their homes, many to nearby Arab nations, marking the beginning of the Palestinian refugee problem.³⁹

After the 1948 War, the new state of Israel fought in a succession of wars with its Arab neighbors. Most of these wars involved the Arab premise that Israel was an illegal state and should be driven from Arab lands, while Israel was determined to eliminate threats to its right to exist. Exacerbated by Cold War tensions through the 1950s and 1960s, the conflict reached a turning point in June of 1967. Hostile rhetoric and aggressive military movements on the part of Syria, Egypt, and Jordan contributed to Israel's preemptive strike that started a war lasting only six days.

The Six Day or June War resulted in Israel's acquisition of several Arab territories identified in figure 1.3 , including the Golan Heights, seized from Syria, the West Bank and East Jerusalem from Jordan, and the Gaza Strip and Sinai Peninsula from Egypt.⁴⁰ Immediately after the conquest, Israel occupied and annexed East Jerusalem, and several years later, the Syrian Golan Heights as well. The Palestinian territories of the West Bank and Gaza Strip were also occupied and Israeli settlements soon dotted the land.

Later that year, the UN Security Council passed Resolution 242 which, among

³⁹Cattan, see n. 25, 60.

⁴⁰The only one of these territories acquired by Israel to be returned to the Arabs was the Sinai Peninsula, resulting from a peace deal with Egypt in 1979.



Fig. 1.3: The Six Days War, territory occupied by Israel in 1967.

other things, called for the withdrawal of Israeli forces from the occupied territories.⁴¹ However, Israel refused to withdraw from the territories, and Syria opposed the clause in the resolution that implied Israel's right to exist. The resolution notably did not take into account the plight of the Palestinians, whether refugees or inhabitants of the Israeli occupied territories.

The territories remained a source of conflict in the region. Partly in an attempt to regain their lost territories, Egypt and Syria launched a surprise attack on Israel in 1973 on Yom Kippur, the Jewish Day of Atonement.⁴² Despite substantial losses in the first few days of the war, Israel pushed back the Arab forces after a massive American arms airlift.⁴³

Additionally, the Palestine Liberation Organization (PLO), a guerilla organization of refugee Palestinians, launched attacks into Israel from bordering countries. The invasion of "southern" Lebanon in 1982 (which actually turned out to be an invasion as far as the capital in Beirut), was an attempt to stop the shelling by the PLO across Israel's northern border.⁴⁴ The resistance movement spread to the occupied territories of the West Bank and Gaza Strip with the first *intifada*, or Palestinian uprising against Israeli occupation in 1988. The uprising was reprised in 2000 when Israeli Defense Force troops marched on the holy Haram al-Sharif in Jerusalem, instigating the second, or Al-Aqsa *intifada*.

Despite the protracted conflict over the land of Palestine, the region has seen some efforts toward peace. In 1978, Egypt and Israel began negotiations at US presidential retreat Camp David, eventually culminating in the signing of the

⁴¹United Nations Security Council, "Resolution 242," 22 November 1967, S/RES/242, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/7d35e1f729df491c85256ee700686136?OpenDocument> (accessed Jan. 18, 2010).

⁴²Cattan, see n. 25, 135.

⁴³Ibid., 137.

⁴⁴Martin Gilbert, *The Routledge Atlas of the Arab-Israeli Conflict* (London: Routledge, 1996), 124.

Egyptian-Israeli Peace Treaty at the White house in 1979. One result of the treaty was Israel's return of the Sinai Peninsula to Egypt. Jordan followed suit in 1994 when the Israel-Jordan Peace Treaty was signed, though this agreement did not involve any exchange of territory. However, the first Palestinian *intifada* terminated with the Israel-PLO peace accord in 1993 (Oslo I), which promised the gradual transfer of powers in some parts of the occupied territories to a Palestinian Authority. Two years later, in 1995, Israel and the PLO signed another accord that laid out a framework for the proposed transfer of powers, which led to redeployment of Israeli armed forces from some parts of the occupied territories and a limited degree of Palestinian autonomy.⁴⁵

Continued Palestinian and Israeli negotiations since 1995 have not yet culminated in a final peace agreement, and many issues still drive the Palestinian-Israeli conflict. Negotiators must understand and respond to the years of history behind each of these issues if the issues are to be resolved in a lasting agreement. This thesis addresses the history of one of these issues, water, as a starting point for shifting some of the focus on the remaining issues in the Palestinian-Israeli conflict to their historical roots.

Sources

Oral interviews form the primary basis for my study of water in the Palestinian-Israeli conflict. In the summer of 2008 I spent nearly two months interviewing Palestinian inhabitants of the West Bank about the water situation there. Most of the interviewees were residents of a little village called Zababdeh. The majority of the interviewees were elderly residents, especially women, who could remember the time of the British Mandate and Jordanian administration in

⁴⁵For a more thorough explanation of the Palestinian *intifadas* and peace treaties between Israel and its enemies, see Bickerton and Klausner, see n. 23.

their village. This group of people ranged from 61 years of age to 87 at the time of interviewing. They came mostly from farming families who had lived in Zababdeh for several generations.

Since Zababdeh's elderly population spoke or understood little if any English, I required a translator for the interviews. My translators were also Zababdeh residents, each translating for different interviews. One of them was a policeman and barber, and the other was a student at the nearby Arab American University. Although both translators spoke proficient English, the translating process naturally presented many limitations. We experienced the predictable difficulties of ensuring the translator correctly understood my questions before attempting to relay them to the interviewee and the reverse process of the translator interpreting the responses and explaining them to me. On occasion, one translator also guided the interviews by anticipating my questions and expecting specific answers. Consequently, he sometimes left out parts of the responses or qualified them with an explanation of why the interviewee said certain things.

Another common problem with oral interviews is the memory of interviewees. Because most of them were elderly, I expected inconsistencies and forgetfulness in their stories. For the most part, though, their recollections of life in Zababdeh when they were growing up or during their young adulthood were surprisingly lucid. Even the women in their 80s recounted anecdotes from their childhood in great detail.

The stories were personal accounts of Zababdeh inhabitants' own lives, so the natural biases of the interviewees, based on their individuality, were apparent and expected. Their recollections were also colored by present situations. At the time of the interviews, Zababdeh's residents had gone through what they considered a year of low rainfall, while the meager amounts of water they received in the village network from the municipality came only every few weeks. Additionally, many of

the questions I asked related to their perceptions and opinions about the changes they had experienced over the course of their lives.

I carried out the interviews in a relaxed, informal setting. My translators brought me to the homes of the interviewees, who were usually people they knew personally. We always exchanged greetings and usually ate and drank something before I took out the voice recorder for the interview. Often other family members or friends were also in attendance, sometimes contributing their opinions to the interview as well. I did not carry a list of questions but simply asked general questions about the recollection of different eras of their lives in order to illicit their stories and observations. The interviewees were very friendly and open with me about their lives and the memories they had. To respect their privacy, I have only used their first names throughout the thesis.

I also interviewed people outside Zababdeh with expertise in engineering, archaeology and history, and policy and management. Since these experts were well-educated and spoke English, I conducted the interviews without a translator. The interviews added to the overall context of my research and provided valuable information and perspective on the water problem in Palestine.

See Appendix A for information about my interviews with people from Zababdeh and with professional interviewees. Also, see Appendix B for a note on sources I used for primary documents.

Structure of the Study

Chapter two describes the unique geography and the water resources of Palestine as a whole, and Zababdeh in particular. The inhabitants of the village primarily utilized ancient methods of water storage and collection until the second half of the 20th century. Like many other communities in Palestine, Zababdeh also relied

heavily on agriculture. After the Israeli occupation in 1967, the village experienced drastic changes both in agricultural practices and domestic water use.

Chapter three highlights the absence of clear and defined Palestinian water rights and by association the lack of clean, consistent supplies of water to Palestinians. The people of Zababdeh were marginalized by every administration in the West Bank from the British to the Palestinian Authority. These governments failed to develop water resources and deliver municipal supplies to many villages like Zababdeh, leaving those villages without reliable and clean water.

Chapter four addresses the absence of a water war in Palestine. It follows the changes to the ways the people of Zababdeh both accessed and used water in the last century. They experienced many improvements after the Israeli occupation in 1967, leaving the older generation relatively contented. The visibility of an enormous water consumption gap between Palestinians and Israelis, however, infuriates many Palestinians and aggravates the already tense situation in the region.

Chapter 2

A Fragile Geography, a Fragile History

Introduction

The unique and varied landscape of Palestine attracted many explorers and scholars during the late nineteenth and early twentieth centuries who created a thorough foundation for the study of the region's geography. Some of the earliest works originated with an interest in Palestine as the “holy land,” often including Greater Syria. One explorer and theologian, George Adam Smith, prefaced his *Historical Geography of the Holy Land* by noting:

Students of the Bible desire to see a background and to feel an atmosphere—to discover from ‘the lie of the land’ why the history took certain lines and the prophecy and gospel were expressed in certain styles—to learn what geography has to contribute to questions of Biblical criticism—above all, to discern between what physical nature contributed to the religious development of Israel, and what was the product of purely moral and spiritual forces.¹

Smith recognized the importance of understanding Palestine's geography when studying the paths of history and the perceptions of its writers.

The relationship between humans and their environment forms a central theme in Fernand Braudel's *The Mediterranean*. As he explains, it is “a history whose passage is almost imperceptible. . . a history in which all change is slow, a history of

¹George Adam Smith, *Historical Geography of the Holy Land, Especially in Relation to the History of Israel and of the Early Church* (London: Hodder and Stoughton, 1894), vii.

constant repetition, ever-recurring cycles.”² The slow, repetitious history of geography differs from the shorter-term fluctuations and flares of social and individual history.

Another scholar of history in the Mediterranean region, John McNeill, argued that the mountainous regions surrounding the sea experienced “not mere fluctuations within a broad and resilient equilibrium, but a sea change,” in many cases within the last two hundred years.³ The stark changes in their relationship to their environment many groups living in the Mediterranean mountains experienced were, in McNeill’s view, more significant than the changes that occurred over the course of centuries. Rather than a system of recurring cycles, he argues that the mountains of the Mediterranean were subject to only a “fragile stability” and an irregular “rhythm of ecological history.”⁴

The modern Palestinian-Israeli conflict raises questions about the significance of geography in the conflict, especially in terms of the Palestinians’ struggle for water. The West Bank, where most non-refugee Palestinians live, is a mountainous region with scarce water resources. This chapter examines changes to the interaction between the inhabitants of the village of Zababdeh and their mountain environment, particularly their water resources. The chapter studies the geography of Zababdeh within the context of the country as a whole, then explores how the village’s inhabitants traditionally accessed and used water through the first half of the 20th century. Like the Mediterranean Mountain groups McNeill describes, the

²Fernand Braudel, *The Mediterranean and the Mediterranean World in the Age of Philip II*, translated by Siân Reynolds (New York: Harper & Row, 1972), 20-21. Braudel dedicates the first section of his book to “The Role of the Environment,” that long, cyclical history known as the *longue durée*. The second section is devoted to “social history, the history of groups and groupings... this time with slow but perceptible rhythms.” Third, he addresses history “of individual men... ‘l’histoire événementielle’, that is, the history of events.”

³J. R. McNeill, *The Mountains of the Mediterranean World: An Environmental History* (New York: Cambridge University Press, 1992), 2.

⁴*Ibid.*, 352.

people of Zababdeh experienced a fragile ecological stability throughout their history. The second half of the 20th century saw developments, emerging mostly during the era of Israeli occupation, that suddenly and drastically transformed the previously slow-moving, cyclical relationship between Zababdeh's inhabitants and their environment.

The Environment

Climate and Topography

The thin strip of land that makes up historical Palestine, roughly 28,000 sq. kilometers (11,000 sq. miles) in area, shows great geographic variability.⁵ Three basic topographic zones make up the region: the Coastal Plain, the Central Mountains, and the Jordan Valley.⁶ The zones run parallel to each other in north-south belts, converging in a fourth zone, the Negev Desert to the south.⁷ Most locations in Palestine fall under a Mediterranean climate classification, with warm, dry summers and cool, wet winters.⁸ However, Palestine lies at a crossroads of three arid deserts—the Syrian, Arabian, and Sahara— which intersect with the Mediterranean Sea along the country's western edge. Smith described the region as

⁵Central Intelligence Agency, "The World Factbook," URL: <https://www.cia.gov/library/publications/the-world-factbook/> (accessed Oct. 22, 2010). Area based on geography statistics for Israel, West Bank, and Gaza.

⁶The Jordan Valley is also called the Ghor, Arava, or rift valley since it is part of the Great African Rift Valley.

⁷In some geographical studies, the Negev is treated as a completely separate zone from the other three due to its aridity. Still other studies describe the "fourth zone" as the highlands east of the Jordan River.

⁸The most significant divergences from the moderate Mediterranean climate come in the Jordan Valley, which exhibits Mediterranean, steppe, arid desert, and subtropical climate characteristics. See Yehuda Karmon, *Israel: A Regional Geography* (London: John Wiley & Sons, 1971), 21; R. O. Whyte, "The Phytogeographical Zones of Palestine," *Geographical Review* 40, no. 4 (October 1950), URL: <http://www.jstor.org/stable/211105> (accessed Oct. 18, 2010): 606; M. Zohary, "A Vegetation Map of Western Palestine," *The Journal of Ecology* 34, no. 1 (February 1947): 1–19, URL: <http://www.jstor.org/stable/2256759> (accessed Oct. 18, 2010), 2. Zohary and Whyte explain Palestine's climate in terms of phytogeography which identifies a cohesive region based on its flora.

“a bridge between Asia and Africa—a bridge with the desert on one side and the sea upon the other.”⁹ In general, precipitation gradually decreases as one moves eastward through Palestine. Additionally, rainfall decreases with southward movement, while temperature increases. The result is lush, green hills and valleys in the north that transition into a barren, arid desert in the south.

The westernmost zone of Palestine, flanking the Mediterranean Sea, is the Coastal Plain. It stretches nearly 190 kilometers (120 miles) from the Plain of Acre in the north to the Gaza Strip in the south.¹⁰ Today most of this area falls within the boundaries of the State of Israel, while its southernmost stretch covers almost the entire Gaza Strip.

Just east of the Coastal Plain runs the Central Mountain zone, which covers most of the West Bank. The entire region, which occupies approximately 9,600 sq. kilometers (3,700 sq. miles), is traversed by valleys. Within modern day Israel, the northernmost section of the mountain zone, Upper Galilee, is a massive plateau which descends into hills and east-west ridges. Across the low-lying Valley of Jezreel that bisects the mountain zone stretch the 1,530 sq. kilometers (950 sq. miles) of Samarian highlands, scattered with valleys. The Samarian highlands, within the northern half of the West Bank, transition into the Coastal Plain to the west, and to the east they drop off into the Jordan Valley. The southern half of the West Bank hosts the slightly higher, more rugged, and typically more barren Judean plateau, separated by a valley from the hills of the Shephelah to the west, the low hills along the southern portion of the Coastal Plain (see figures 2.1 and 2.2).¹¹

The Coastal Plain and Central Mountains see the most rainfall, though the

⁹Smith, see n. 1, 6.

¹⁰M. Y. Nuttonson, “Agroclimatology and Crop Ecology of Palestine and Transjordan and Climatic Analogues in the United States,” *Geographical Review* 37, no. 3 (June 1947), URL: <http://www.jstor.org/stable/211130> (accessed Oct. 18, 2010): 437-38.

¹¹Smith, see n. 1, 201, 248.



Fig. 2.1: Samarian highlands. The mountains of Samaria tend to be shorter and greener than those of Judea.

amount varies from year to year. While the plain is generally warm and humid, the mountains tend to be slightly cooler because of their higher elevation.¹² The prevailing westerly winds typical of mid-latitude locations like Palestine push moisture from the Mediterranean Sea inland. As it moves up the mountain slopes, the air cools and its capacity to hold moisture decreases. During the wintertime when temperatures are the lowest, rain drenches the coast and western slopes of the mountain zone, with occasional snowfall in the highest elevations. Rainfall is rare in summertime, though the high humidity often results in heavy morning dews.¹³

¹²A. Bonné, "Natural Resources of Palestine," *The Geographical Journal* 92, no. 3 (September 1938), URL: <http://www.jstor.org/stable/1788834> (accessed Oct. 18, 2010): 259; Nuttonson, see n. 10, 445.

¹³Smith, see n. 1, 65.



Fig. 2.2: Judean highlands. In general, Judea has taller, steeper, drier mountains than those in Samaria.

The eastern-most section of the country, the Jordan Valley, is a portion of the Great Rift Valley that extends from Turkey to South Africa.¹⁴ Climate and vegetation in the Jordan Valley vary according to altitude, which ranges from approximately 200 meters (655 feet) above sea level to more than 400 meters (1,310 feet) below sea level, and according to latitude. The valley drops from the north of the country near the Sea of Galilee into a low depression divided by the Jordan River. Beyond the river's termination in the Dead Sea, the elevation rises slightly until it reaches the Red Sea at the southern tip of the country. The section of this valley between the city of Beit She'an and the Dead Sea lies within the boundaries of

¹⁴Y. Karmon, "The Geography of Israel: Ancient and Modern," *Journal of Educational Sociology* 36, no. 8 (April 1963), URL: <http://www.jstor.org/stable/2264504> (accessed Oct. 18, 2010): 369.

the West Bank, while the remaining portion west of the river is in Israel's territory.

The leeward side of the mountains extending into the Jordan Valley receives much less precipitation than the coast and windward side of the mountains for two reasons. First of all, most of the moisture has already condensed and fallen by the time the air crosses the mountain peaks. The eastward side experiences a rain shadow effect. Second, the slopes dropping into the Jordan Valley are much more abrupt than their western counterparts that gently descend toward the Mediterranean. The elevation change happens quite drastically, as does the rise in temperature associated with lower elevation. Once again, the air is capable of holding more moisture, so it no longer condenses and falls as easily. In the Jordan Valley, winters are relatively warm and very humid, with only rare precipitation, while the summers are hot and dry.¹⁵

The fourth zone, the Negev desert in the south of the country, falls almost entirely within modern Israel. The large inverted triangle pointing toward the Red Sea actually extends the other three parallel geographical zones southward. A small section of the northwestern corner of the Negev makes up the southern-most portion of the coastal plain. The central hills and rift valley also continue south through the desert.¹⁶ The region, encompassing more than half the total area of Palestine, fits into the semi-arid to arid desert climate categories.

Water Resources

Northern Palestine possesses several water bodies. Springs and rainwater runoff collect in the Jordan, Palestine's major river. The Upper Jordan River flows

¹⁵Karmon, "The Geography of Israel: Ancient and Modern," see n. 14.

¹⁶Karmon, *Israel: A Regional Geography*, see n. 8, 268-69. Although the Negev makes up nearly half of the area of Palestine, it possesses only a very small, marginal population of Arab Palestinians today. While it is a significant part of Palestine's geography, I focus the remainder of this chapter on the northern part of the country.

through the Huleh Valley then feeds the only freshwater lake in Palestine, the Sea of Galilee.¹⁷ Emerging from the south end of the Sea of Galilee, the Lower Jordan eventually terminates in the salty Dead Sea. In addition, rainfall runoff creates seasonal streams that run through *wadis* and flow toward the Jordan River or the Mediterranean Sea.¹⁸

Refurbishing of water bodies is due to the heavy precipitation of the rainy season. Rains begin to fall usually in October or November, drop the most precipitation from December to February, and diminish in March and April. Levels of precipitation vary throughout the country, lessening with distance from the Mediterranean and with decreasing latitude. Hence, the “sources” of the Jordan River lie in the northern extremities of the country. The main sources are three springs in the north, the Dan, Hasbani, and Banias springs (see figure 2.3), which later become rivers.¹⁹ Runoff from Mt. Hermon, straddling Lebanon, Syria, and Palestine, makes an important contribution to the Upper Jordan as well. As the Jordan flows through the Huleh Valley to the Sea of Galilee, it is directly fed by runoff and several other smaller springs.²⁰ The Lower Jordan receives only a little input from rainfall, although some tributaries, mostly ephemeral streams (aside from the Yarmouk River to the east), drain into it until its termination in the Dead Sea.²¹

The underground aquifers also rely heavily on rainfall. As precipitation covers the soil, water either continues to move over the soil as surface runoff, or it penetrates the vadose zone, the unsaturated layer of the soil through which water

¹⁷The lake is alternately called Kinneret, Genessaret, and Tiberius (Tabarriya in Arabic).

¹⁸*Wadis* are valleys that are actually dry river beds, though water only flows through them directly after heavy rain, making them drainage courses for the runoff.

¹⁹Karmon, *Israel: A Regional Geography*, see n. 8, 163. While the Hasbani lies within Lebanon, the Dan has been part of Israel since 1948, and the Banias, though formerly within Syria, falls in territory occupied by Israel in 1967.

²⁰Karmon, *Israel: A Regional Geography*, see n. 8, 164; Nuttonson, see n. 10, 439.

²¹These ephemeral streams flow through *wadis* and are usually only present during and directly after the rainy season.



Fig. 2.3: Upper Jordan River. The Banias River shown here originates at the Banias Spring in northern Israel and is one of the three main sources of the Upper Jordan River.

must pass before reaching the water table. The makeup of this layer influences the ease with which water passes through it. In general, lighter soils are more permeable, and heavy soils are less so. The Coastal Plain in Palestine is mostly a light, sandy-loamy soil, and below it lies a massive underground aquifer, the Coastal Aquifer, which runs practically the length of the coastline.

The Central Mountains, on the other hand, are mostly heavy soils, particularly clay.²² Here, the soil has in many places been washed and denuded.²³ These factors, in combination with the problem of rainfall intensity, which limits the soil's ability to absorb water once it has been soaked, inhibit infiltration into the underground aquifers. The limestone makeup of this area has also allowed for the creation of

²²Karmon, *Israel: A Regional Geography*, see n. 8, 14,32.

²³Nuttonson, see n. 10, 449.

karsts, a geologic formation occurring where erosion dissolves rock surfaces and widens fractures, often resulting in large caverns. Karsts drain the surface precipitation into large underground aquifers. Although they are not characteristic of all Palestine, they do help explain the existence of very wealthy aquifers in the mountain region.

Three distinct aquifers have been identified in the Central Mountains of Palestine, based on underground flow direction. They are the Western, Northeastern, and Eastern aquifers. Rainfall on the slopes of the Central Mountains serves to recharge the bulk of these aquifers, though seepage from surface water contributes a little as well, particularly from the Jordan River to the Eastern aquifer. As the aquifers recharge, the pressure from the rising water level in them results in hundreds of springs throughout the country.²⁴

Springs emerge in places where the water table is exposed, often due to surface erosion, and water can flow out of the aquifer. Many lie along the western slopes of the mountain region and in the coastal plain.²⁵ But the most productive are at lower elevations, in valleys, on the coastal plain, or in the Jordan Valley, like the Ein Gedi spring shown in figure 2.4.²⁶ The water table is generally closer to the surface in these areas.

Zababdeh's Geography

The little hillside village of Zababdeh and the beautiful valley it overlooks lie in the northern half of Palestine within the central mountain zone. Zababdeh falls within the Jenin governorate of the West Bank. This area begins the descent from

²⁴Springs in turn feed the surface water bodies of Palestine, particularly the Jordan River watershed as well as *wadis* and ephemeral streams that drain into the Mediterranean Sea.

²⁵Bonné, see n. 12, 261.

²⁶Smith, see n. 1, 77.



Fig. 2.4: The Ein Gedi spring is located in the Jordan Valley near the Dead Sea.

the Samarian hills to the low-lying, fertile Jezreel Valley. The watershed catchment area Zababdeh lies within feeds the northeastern mountain aquifer.

Under current political divisions, the total area of the Zababdeh district is 5,538 dunums (1,368 acres), approximately 937 dunums (232 acres) of which is built-up area, while the remainder is mostly agricultural land.²⁷ From the west, the village views the Basin of Zababdeh that stretches east toward another rocky hillside (see figure 2.5). Olive trees cover the hills, intermingling with the maquis shrub emerging from amid the limestone caves and boulders. Almond, fig, and karab trees occassionally appear as well, peaking over the cement walls surrounding a house or offering shade along a roadside. While the dry summers see these trees and shrubs adorned only by thistles, winter witnesses a flood of vibrant red anemones and other

²⁷World Vision-JWG, Jenin Assessment Program, under “Az Zababida” (n.p.: World Vision International, March 2007).

wildflowers in Zababdeh's hills.

The low-lying Basin of Zababdeh and its thick, rocky clay soils play host to the agricultural endeavors of the village's inhabitants. Like the flowers on the hillside, the vegetation in the valley also depends on seasonal rainfall. Zababdeh lies many kilometers from the Jordan River and has no springs. Because of Zababdeh's situation, at a slightly higher elevation within the hills than nearby Jenin or Qabatiya, the aquifer underneath lacks the pressure that causes springs to burgeon from the ground just a few kilometers away in other cities and villages. Although springs pepper the central mountain region, many rural villages of the West Bank often find themselves rather isolated from these springs. Even the man-made wells in the little village are few, and produce only meager amounts of water. Winter rains alone feed the trees, flowers, and agricultural products of Zababdeh.

The Mountain People

The land of Palestine has been so thoroughly settled throughout history that one would be hard-pressed to find an acre of ground that does not evince human intrusion. Palestinian archaeologist Salah al-Houdalieh said that most of today's Palestinian villages, even the very small ones, have a history of continual occupation from Roman, Byzantine, or Persian periods, or earlier.²⁸ Numerous groups have migrated through the region, and many different powers have controlled it. Amiran sums up the general settlement patterns of Palestine throughout history as follows:

Whenever a satisfactory state of regional development and public security permitted the organic utilization of the different parts of the country the coastal plain gained supremacy and the leading city was a city of the plain. Whenever conditions in the country deteriorated and

²⁸Professor Salah Al-Houdalieh of Al-Quds University, interview with author (Abu Dis, West Bank, 18 June 2008).



Fig. 2.5: The basin of Zababdeh, viewed from a hillside overlooking the village.

settlement in the coastal plain became marginal, its towns decreased in importance, and upland towns gained in relative importance. . . ²⁹

The coastal plain offered more economic opportunity, providing access to the sea and a relatively level route of passage, as well as light, fertile soils for agriculture. But when invaders passed through or a disease became rampant, the coastal cities shrank while the mountain settlements increased in size and importance.

Finklestein and Gophna identify the Chalcolithic to Early Bronze era as “the first chapter of substantial human activity in the highlands.”³⁰ Although initially the settlements were evenly spread, by the Middle Bronze Age they differed based

²⁹D.H.K Amiran, “The Pattern of Settlement in Palestine,” *Israel Exploration Journal* 3, no. 2 (1953): 194-195.

³⁰Israel Finkelstein and Ram Gophna, “Settlement, Demographic, and Economic Patterns in the Highlands of Palestine in the Chalcolithic and Early Bronze Periods and the Beginning of Urbanism,” *Bulletin of the American Schools of Oriental Research*, no. 289 (February 1993): 1-22,

on where they were within the mountain region.³¹ The tablelands of Judaea had settlements mostly on the hill-tops, though occasionally also on the slopes. Because the hill-tops are relatively flat and rainfall is greater at the higher elevations, cultivation has often been practiced there. Further north, in Samaria and Galilee, the mountains are lower and intersected by fertile valleys. Most of the settlements in the Samaria highlands, like Zababdeh, were on the slopes or at the base of the mountains, with a few in the valleys.³²

The origins of Zababdeh are fuzzy at best. Many of the village's current residents trace their roots to a few families that settled there around 1800 CE. The surnames Daibes, Issaid, and Khalil Ibraheem are markers of longevity in the village. These "founders" supposedly came from another Christian village, Al-Taibeh, near Ramallah and Jerusalem.³³ The three families may have purchased the land from the Jarrar family, a wealthy land-owning family in the Jenin area. One of my interviewees gave a different account of how they obtained the land, though. Abu Jilal alleged that sometime during the Ottoman Empire, Turkish officials came to Zababdeh and told the people that were living there that they would have to pay taxes for the lands. The officials began assigning lands to certain families, who, fearing the taxes, fled Zababdeh. According to Abu Jilal, four men agreed to take "all the lands of Zababdeh." Their only condition was that they could choose lands that were near areas of high winter rainwater runoff (see figure 2.6). Consequently, the lands that belong to Zababdeh are "just where the water

URL: <http://www.jstor.org/stable/1357359> (accessed Oct. 18, 2010), 8. The Chalcolithic era was 4500 BCE to 3300 BCE; the Early Bronze era was 3300 BCE to 2000 BCE.

³¹Finkelstein and Gophna, see n. 30, 4,8. The Middle Bronze era was 2000 BCE to 1550 BCE.

³²Amiran, see n. 29, 202-203.

³³Zababdeh Official Website, "History," URL: <http://www.zababdeh.com/historyphp.php> (accessed Oct. 25, 2010), Zababdeh's website gives this account of the village's founders. An undocumented story told to me by a resident of the village suggested at least one of these families emigrated from Karak in Jordan in order to avoid legal action for a crime one of the family members had committed that resulted in someone's death. I was not able to substantiate this claim.

goes, or runs during the winter.”³⁴

Zababdeh, like many areas of settlement in Palestine today, hides vestiges of its ancestors. One of my translators recalled an experience from his childhood when he crawled inside a tunnel that led under the village where he found the remnants of a previous village.³⁵ Zababdeh’s official website claims the village has vestiges from the Roman and Byzantine periods.³⁶ Indeed, a visit to the Latin Church provides the opportunity to view a clearly ancient mosaic on the floor. Some other archaeological sites include the remains of ancient water systems, such as the aqueduct of the Roman city of Caesarea, Hezekiah’s tunnel that connected the Israelite capital of Jerusalem with the nearby Gihon springs, or Jacob’s Well of Biblical tradition in the modern city of Nablus. The ancient town sleeping underneath modern Zababdeh, however, boasts no wells or aqueducts. Instead, the village relied on another ancient water structure: the cistern.

Rock-hewn cisterns can be found dotting the hills near Zababdeh. The *Oxford Encyclopedia of Archaeology in the Near East* gives the following description of traditional cistern construction:

A cistern was normally cut out of rock and its interior coated with a thick layer of impermeable plaster. . . A cistern’s depth would not normally exceed 6 m, so that water could be drawn with relative ease and the cistern could be cleaned by someone upright in it. . . The opening of the cistern was usually narrow in order to prevent falling into it, to prevent evaporation, and to enable convenient pumping. Canals carved into the earth channeled runoff to a small depression or basin at the side of the cistern, where the soil settled or was filtered.³⁷

Evidence of the use of cisterns dates as early as the Chalcolithic period, with

³⁴Abu Jilal, interview with author (Zababdeh, West Bank, 8 June 2008).

³⁵Ibid., comment by translator.

³⁶Zababdeh Official Website, “History,” see n. 33.

³⁷*The Oxford Encyclopedia of Archaeology in the Near East* (New York: Oxford University Press, 1997), s.v. “cisterns.”



Fig. 2.6: A Zababdeh *wadi*, shown above, is an example of the areas of high winter runoff that determined the borders of Zababdeh lands.

continued use through the Iron Age, Hellenistic period, Byzantine period, and beyond.³⁸ Many of the ancient cisterns all over Palestine are still in use.³⁹

Cisterns were essential in places too far from springs to collect water every day. Consequently, cisterns dot the central mountain region of Palestine. One observer commented of the cisterns' ubiquity:

As the period of rain is so short, the people are obliged to preserve as much as possible in rock-cut cisterns, and in Jerusalem itself all, or practically all the water is thus preserved. But not only in the towns is this necessary; all vineyards must have cisterns. In one ancient vineyard of not more than two acres I counted about fifty cisterns. . .⁴⁰

³⁸See n. 37.

³⁹Al-Houdalieh, see n. 28.

⁴⁰E. W. G. Masterman, "Agricultural Life in Palestine," *The Biblical World* 15, no. 3 (March 1900), URL: <http://www.jstor.org/stable/3137064> (accessed Oct. 18, 2010): 189.

All Zababdeh's inhabitants relied on rainwater stored in cisterns throughout the first half of the 20th century. My interviewees born in the 1920s and 1930s all told the same story from their youths, until the 1950s, of the women hiking up Zababdeh's mountains to their family water cisterns to collect jars of water for the day. Some cisterns could be found within the village, but as Miriam and Maria told me, "the water was so dirty, [we] used it for cleaning house..and for animals." They only drank the water from the mountains that flowed into the cisterns over a much cleaner rock catchment area.⁴¹

Mountain cistern water was rarely used for anything except drinking. Since no other water resources (wells, rivers, springs) could be found in Zababdeh, the village inhabitants used dry farming methods to grow their crops. People in other areas of Palestine practiced irrigation since ancient times. The port city of Jaffa, for example, was renowned in the early 20th century for its oranges, fed by the plentiful springs and wadis of the Coastal Plain. In the Jordan Valley, where rainfall is low but springs are plentiful, farmers dug canals to carry water through their lands to irrigate such crops as date and banana palms.⁴²

Since the springs of the mountain region are sparse and irregular, rainfall was the most widespread water source for agriculture there. The heavy clay soil of Zababdeh and the rest of the Central Mountains suited cereal crops such as wheat and barley.⁴³ These were generally planted in valleys of the mountain region during November, just before the onset of the rainy season. Such winter crops lay dormant through the rainy season, then grew through the spring and were generally ready for

⁴¹Miriam and Maria, interview with author (Zababdeh, West Bank, 16 June 2008).

⁴²Smith, see n. 1, 82; George D. Hubbard, "Agriculture in Palestine," *American Journal of Economics and Sociology* 10, no. 3 (April 1951), URL: <http://www.jstor.org/stable/3483870> (accessed Oct. 18, 2010): 263.

⁴³Frank Adams, "Palestine Agriculture," *Annals of the American Academy of Political and Social Science* 164 (November 1932), URL: <http://www.jstor.org/stable/1018960> (accessed Oct. 18, 2010): 74.

harvest by June. Farmers rotated the crops from year to year, planting wheat and barley one year, then replacing the cereals with a leguminous crop the following year or a summer crop such as durra or sesame.⁴⁴ These crops survived without any irrigation, relying solely on the moisture stored in the soil from the rainy season.

Perhaps the most valuable, and certainly the most beloved crop to the inhabitants of the Central Mountains was the olive tree.⁴⁵ Though initially the trees needed some extra attention and water beyond what the rains supply, once they matured, they survived on only seasonal rainfall.⁴⁶ The trees provided not just the olives themselves, typical at any dinner table in Palestine, but the oil that could be used for cooking and fuel or could be made into soap. Zababdeh's people especially prized their olive trees. One of my translators said his father likes olive trees so much that he works in the groves as a hobby.⁴⁷

The stored moisture in the heavy clay soil of Zababdeh even proved enough to sustain vegetable crops. One scholar remarked, "The soil was the source of Palestine's wealth and had been so for ages before."⁴⁸ In years of plentiful rainfall, the soil stored enough water that irrigation of vegetable crops was not necessary. A Zababdeh resident named Alad stated that on his twelve dunums (three acres) of land "[we] plant all the vegetables in the land... for the winter in the winter, and for the summer in the summer... And the soil will be wet, from the winter water, so it will be enough for the vegetables in the summer."⁴⁹

Naziha recalled crops she planted on her family's land, including "tomatoes potatoes, peas, hummus... In March [we] plant watermelon and tomatoes, potatoes, and in the summer, other products... and the next year [we] plant wheat... Because

⁴⁴Adams, see n. 43, 74-75. Durra is the name used in the Middle East for a type of sorghum.

⁴⁵Smith, see n. 1.

⁴⁶Al-Houdalieh, see n. 28.

⁴⁷Fairuz, interview with author (Zababdeh, West Bank, 15 June 2008).

⁴⁸Dr. Jacob de Haas, quoted in Hubbard, see n. 42, 249.

⁴⁹Alad, interview with author (Zababdeh, West Bank, 19 June 2008).

[we] plant the land twice.”⁵⁰ (See figure 2.7. Some of my interviewees told me Zababdeh was especially known for its watermelons.⁵¹ Farmers in Zababdeh developed their techniques to suit the conditions in which they worked, relying on the water stored in the soil from the rainy season, and rotating their crops for continual production each year. The crop rotation generally increases the fertility of the land, allowing the soil a chance to replenish depleted nutrients.

Because the cereals, olive trees, tomatoes, watermelons, and all the other crops produced in Zababdeh were completely rain-fed, the livelihood of the villagers depended on sufficient winter rains. They produced little surplus, mostly farming merely to feed themselves.⁵² Despite the obvious stress associated with such dependence on their environment, the older generations of Zababdeh, now in their seventies and eighties, seemed to love planting and harvesting their lands. One Zababdeh farmer, Alad, said he and his wife worked their lands for sixty years, and he was the best farmer in the region. He explained his success, saying “ When the land [is yours] it will be like your son. And of course, you like your son, you love him so much, you do everything for him.” My translator agreed, “Palestinian people like lands so much, like their sons. They don’t like to sell any lands.”⁵³

The people of Zababdeh developed a close connection with the land and a deep dependence on the rainfall. Each year they awaited the rainy season hoping enough precipitation would fall to drench the soils and fill their cisterns. Water was not only an issue of survival for the people in Zababdeh, but also a key to their passion of working their lands.

⁵⁰Naziha, interview with author (Zababdeh, West Bank, 17 June 2008).

⁵¹Miriam and Maria, see n. 41; Ashraf, interview with author (Zababdeh, West Bank, 3 June 2008).

⁵²Miriam and Maria, see n. 41.

⁵³Alad, see n. 49.



Fig. 2.7: Fields of Zababdeh, divided into sections for the variety of crops grown there.

Change in the 20th Century

Alad, Naziha, Fairuz and the rest of Zababdeh's oldest generation all grew up without water faucets or showers, and of course washing machines were well beyond the realms of their imaginations. Wadia told me "all the world developed these things in 1970s."⁵⁴ Though many of these amenities were available in other parts of the world and even in other parts of Palestine much earlier than the 1970s, Wadia felt her little village developed at the same pace as the rest of the world.

This development in Zababdeh, peaking around 1970, originated with some important changes beginning around the 1950s. Once houses could be built of concrete, the ability to store relatively clean water, cleaner than the water that ran

⁵⁴Wadia, interview with author (Zababdeh, West Bank, 17 June 2008).

through the dirt streets of the village, became possible. The concrete roofs (the catchment areas) were connected by pipes to storage cisterns below the houses, as shown in figure 2.8, so many families no longer had to fetch water from the mountains. Wealthier families in the village installed taps in their homes in the 1970s, and the village water network was built in 1979.⁵⁵ By this point, those people whose houses were connected to the water network simply had to turn on a faucet for water to reach them.

The water was coming from somewhere else, somewhere outside Zababdeh. The water from the village network originated from a well many kilometers away near the village of Arrabi, disconnecting Zababdeh from its water source. No longer relying on a fixed amount of stored rainwater, the people of Zababdeh began using water for more than drinking and cooking. Within a period of only twenty to thirty years, the people of Zababdeh went from toting water several kilometers just for drinking to washing their clothes in washing machines.

Seemingly, the constant amid the rush of change in the second half of the 20th century was Zababdeh's persistent practice of dry farming. Although water began coming in pipes to the faucets in people's houses, it was still too precious and scarce to use it for agriculture. Farmers in the basin of Zababdeh continue to grow wheat, durra, hummus (chickpeas), even tomatoes, and cucumbers using that same dry farming method that has been used in the West Bank Mountains for centuries.

Even though the method of farming remained, much changed in the experience of the people doing it. Certain crops have become less successful in Zababdeh, such as watermelons. Ashraf explained, "Zababdeh was dependent like fifty years ago on watermelons. . . the size of the watermelon was huge before." Now watermelons are rare in Zababdeh's fields, and those that can be found are relatively small. Ashraf, a

⁵⁵ Abed, Zababdeh municipal council member, interview with author (Zababdeh, West Bank, 19 June 2008).



Fig. 2.8: Drainage pipes connecting a cement roof catchment area to the house's underground cistern.

water engineer, attributes decline of the watermelons in Zababdeh in part to a “decrease in the humidity of the topsoil.” My translator Joseph observed a change as well, relating that when he was a boy he could dig a hole in the ground even in summer and the soil would still be wet, but now it is dry.⁵⁶ Although the actual environmental change in Zababdeh cannot be accurately measured because of the inavailability of accurate data, Joseph’s observation suggests at least a perceived change that affected his relationship with the land.

Evidence of a change in the relationship between Zababdeh inhabitants and their environment is the widespread abandonment of agriculture altogether. Some villagers, such as Alad, continued working their lands even into their 70s and 80s. Many others, though, stopped farming much earlier. Miriam and Maria said they

⁵⁶Ashraf, see n. 51.

had been renting their twelve dunums of farmland and eighteen dunums of olive trees, an uncommonly large landholding for Zababdeh, to Muslim families for the past thirty years. Another Zababdeh woman said many lands in Zababdeh were rented to Palestinian refugees. She explained that after the Israeli occupation, many Zababdeh residents left farming for other pursuits.⁵⁷ Many commuted daily to Israel to work, and some moved even farther to places like Europe or South America.⁵⁸ Employment for Zababdeh's people diversified considerably, with people working in factories, doing construction, or serving as nurses, policemen, or teachers, earning substantially more than they had farming their lands.⁵⁹

The abandonment of farming only increased the disconnect between Zababdeh's inhabitants and their land and water. The new occupations were certainly more lucrative than farming had been, so people could afford to buy agricultural products imported from Israel, along with other merchandise that was rare before the occupation. They no longer had to depend on successful crops, well-fed by the rains, to feed their families.

Conclusion

If, as George Adam Smith suggested, the "lie of the land" does indeed help explain why "history took certain lines," Palestine's unique and varying geography plays a pivotal role in the Palestinian-Israeli conflict. The case of Zababdeh demonstrates this importance by the changes the village's inhabitants experienced in their relationship with their environment primarily right after the Israeli occupation. Zababdeh's people had been practicing methods of water collection and agriculture that had been used for centuries in the West Bank Mountain region.

⁵⁷Jadda, interview by author (Zababdeh, West Bank, 1 June 2008).

⁵⁸Naziha, see n. 50.

⁵⁹Jadda, see n. 57; Wadia, see n. 54.

Around the middle of the 20th century, and most dramatically during the 1970s, they experienced a sudden shift in their lifestyles, demonstrating the fragility of their relationship with their environment. Modern conveniences and an improving economy that seemingly came with the occupation created a gap between Zababdeh's inhabitants and their environment. They transitioned from a stark awareness of exactly where their water supplies were coming from, how much water they had, and how each drop was used, to being disconnected from their water source and unaware of the quantities of water that would be available to them. This sudden change in the fragile relationship Zababdeh's inhabitants had with their environment was catalyzed by a sudden change in the history of the Palestinian-Israeli conflict when Israel occupied the West Bank.

Chapter 3

Water Policy and the Palestinians: A History of Non-Involvement

Introduction

Access to water resources is a basic human right. The Universal Declaration of Human Rights adopted unanimously by the United Nations General Assembly in 1948 states: “Everyone has the right to a standard of living adequate for the health and well-being of himself and of his family, including food, clothing, housing...”¹ Gleik claimed that although water was not specifically mentioned in this list, it was implied as a resource necessary for adequate health and well-being.² The United Nations Millennium Declaration, however, specifically identified the lack of safe drinking water as one of the “abject and dehumanizing conditions of extreme poverty.”³ Necessary for drinking, cooking, cleaning, and other aspects of day to day life, water is vital for human survival.

Unfortunately, these conditions have not been met for many Palesitnian people. The experience of Zababdeh’s inhabitants during the 20th century shows a consistent pattern of water stress and scarcity. It also shows a consistent failure on the part of the three administrations in the West Bank prior to the establishment of

¹United Nations General Assembly, “Universal Declaration of Human Rights,” 10 December 1948, URL: <http://www.un.org/en/documents/udhr/> (accessed Apr. 20, 2010).

²Peter H. Gleick, *The Human Right to Water*, techreport (Pacific Institute, May 2007), URL: http://www.pacinst.org/reports/human_right_may_07.pdf (accessed Jan. 18, 2010).

³United Nations General Assembly, “United Nations Millenium Declaration,” 8 September 2000, URL: <http://www.un.org/millennium/declaration/ares552e.htm> (accessed May 27, 2010).

the Palestinian Authority, (i.e., the British, Jordanians, and Israelis), to provide a clean, consistent, and affordable supply of water, or even acknowledge the Palestinians' right to it. Today, Palestinians in the West Bank do not have defined water rights because they were not involved or included in the water policy-making in the region over the last century. Under British, Jordanian, and Israeli administration in the West Bank, Palestinian water rights simply were not on the agenda. Moreover, governmental development of water resources for many West Bank inhabitants, including those in the village of Zababdeh, did not occur.

British Mandate (1920-1948)

Just as Palestine had been a “poor and neglected part of the Ottoman Empire,” it remained so under the new British administration.⁴ Palestinians in villages like Zababdeh saw few changes in their day to day lives. According to Wadia, a Zababdeh woman born in the 1920s, the British only passed through villages like Zababdeh when they were traveling between the big cities, like Jenin, Ramallah, Bethlehem, and Nablus. “They stayed there, but the village like Zababdeh, the small village, no.”⁵

The British government initially retained Ottoman water law and allowed the local customary system of regulation to persist, which centered on the regard for water as a communal resource.⁶ Traditions in Palestine, primarily derived from

⁴Ian J. Bickerton and Carla L. Klausner, *A Concise History of the Arab-Israeli Conflict*, updated 4th ed. (Upper Saddle River, NJ: Pearson Prentice Hall, 2005), 17.

⁵Wadia, interview with author (Zababdeh, West Bank, 17 June 2008).

⁶The customary system of water regulation was adapted and codified by the Ottoman government under the civil code “Mejelle” in the 1870s. Dante A. Caponera identified the following procedure resulting from the civil code:

- (i) all waters were declared as vested in the state, the crown or incorporated in the public domain, the state thus taking the place of the Moslem community;
- (ii) every use of water (other than for drinking or animal watering purposes) left free under colonial legislation and Shari'a was placed under government control;
- (iii) water commissions were set up to survey and recognize established water rights;

Islamic law, dictate that all men have the right to use water.⁷ An order of priorities determined who could use what water, when, and for what purposes. For example, thirst was first priority, for men and then animals, no matter the water source.⁸ Only after thirst was quenched could water be used for domestic or irrigation purposes. Naturally occurring bodies of water, such as lakes and rivers, were non-saleable, but upper riparians, those nearest the headwaters, had first priority to them. Additionally, any wells dug for the public benefit, or left by nomads, remained available to all. But when a person dug a well himself, he owned all irrigation rights for that well, though he still could not deny anyone that water to drink.⁹ Little changed in this traditional system of water regulation when the British took control of Palestine after World War I.

The adherence of Zababdeh's inhabitants to Islamic law is unclear. As a predominantly Christian village, Zababdeh differed from the surrounding villages in more than just the greater prevalence of churches than mosques, while the rural nature of these villages made them strikingly similar in many other ways.¹⁰ At the

(iv) land registers were compiled in order to keep a written record of duly recognized land and water rights.

Dante A. Caponera, *Principles of Water Law and Administration: National and International* (Rotterdam, Netherlands: A.A. Balkema Publishers, 1992), 71.

⁷Caponera specifies that under Islamic water law, water must be available to all the Muslim community. While he emphasizes that water is the property of the Muslim community, he points out that the "right of thirst" extends even to animals, because "every living creature was created" from water. Caponera, see n. 6, 48-49; Melanne Andromedea Civic, "A Comparative Analysis of the Israeli and Arab Water Law Traditions and Insights for Modern Water Sharing Agreements," *Denver Journal of International Law and Policy* 26 (Spring 1998): 439.

⁸Civic, see n. 7, 438-440.

⁹Caponera, see n. 6, 70.

¹⁰According to the official 2007 census of the Palestinian territories, Zababdeh (Az Zababida in the census publications) had a population of 3,665. No official statistic is available for the number of Christians in Zababdeh, but the village's own website reported a total population of 3,500 in Zababdeh, with 2,251 Christians represented by "Catholic, Orthodox, and Protestant parishes." The Latin Patriarchate of Jerusalem reports a population of 4000 in Zababdeh, with 2000 Latin Catholics, 700 Orthodox, 150 Lutheran, (altogether 66% of the total population), and 1000 Muslims. Palestinian Central Bureau of Statistics, "Population, Housing, and Establishment Census 2007," URL: http://www.pcbs.gov.ps/Portals/_pcbs/census2007/ind_loca_09.pdf (accessed Sept. 30, 2010); Zababdeh Official Website, "Population," URL: <http://www.zababdeh>.

commencement of the Mandate, Zababdeh had no natural water bodies or even public wells, only storage cisterns; therefore, the village lacked the features around which the Islamic customs were based.

The British Mandate for Palestine was classified as a Type A mandate charged with rendering “administrative advice and assistance” to the communities of the former Turkish empire “until such time as they are able to stand alone.”¹¹ The communities of Palestine consisted generally of the indigenous Arabs and the Jewish population, comprised mostly of European immigrants. While the mandatory (the British government) was supposed to encourage local autonomy and develop self-governing institutions, British policy and other terms of the mandate specifically aimed to establish a Jewish national home in Palestine, neglecting autonomy for the Arab Palestinians.¹²

In striving to realize the aspiration of a national home, Zionist leaders throughout the Mandate attempted to secure water resources for the Jewish communities. The “official statement of Zionist purpose” as outlined in the Basel Declaration of the first Zionist Congress in 1897 included “the colonization of Palestine by Jewish agricultural and industrial workers.”¹³ A central ideal of the Zionist movement was physical labor, working the soil of Palestine.¹⁴ While land

com/population.php (accessed Sept. 30, 2010); Latin Patriarchate of Jerusalem, “Partnership of ‘Fulda’ with Zababdeh,” URL: http://www.lpj.org/index.php?option=com_content&view=article&id=602:partnership-of-the-qkomturi-hrabanus-maurus-fuldaq-with-zababdeh&catid=82&Itemid=113&lang=en (accessed Aug. 13, 2010).

¹¹League of Nations, “The Covenant Of The League Of Nations,” 28 April 1919, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/6cb59816195e58350525654f007624bf?OpenDocument> (accessed Jan. 18, 2010).

¹²League of Nations, “Mandate for Palestine,” 12 August 1922, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/9a798adbf322aff38525617b006d88d7/2fca2c68106f11ab05256bcf007bf3cb?OpenDocument> (accessed Jan. 18, 2010).

¹³“The Basel Program 1897” in Charles L. Geddes, ed., *A Documentary History of the Arab-Israeli Conflict* (New York: Praeger, 1991), 22.

¹⁴This ideal was the emphasis of the Second Aliyah, in particular. Howard M. Sachar, *A History of Israel: From the Rise of Zionism to Our Time*, 2nd ed. (New York: Alfred A. Knopf, Inc, 1996), 74.

acquisition took center stage in Zionist literature and lobbying efforts, water went hand in hand with land as a necessity for the agricultural and industrial endeavors. In a correspondence with British Prime Minister David Lloyd George in 1919, Zionist leader Chaim Weizmann asserted:

The whole economic future of Palestine is dependent on its water supply for irrigation and electric power, and the water supply must be from the slopes of Mount Hermon, from the headwaters of the Jordan and the Litani River.¹⁵

The water resources identified by Weizmann comprised what he felt were a bare minimum to sustain the numerous Jewish agricultural settlements that were established in Palestine since the beginning of the 20th century, as well as the streams of immigrants who hoped to arrive in the future.

Zababdeh, however, remained uninvolved. Wadia commented that people in her village were too busy to worry about politics. “They were farmers and they were busy... they would plant their lands, so they didn’t care.” She described how horrible Turkish occupation had been, and after that the British seemed at first like a nice reprieve. “They just left [the British] alone,” and the British left them alone.¹⁶

Meanwhile, with British support for their cause, the Zionists were able to secure land for the immigrants to Palestine and carry out plans to provide them with water and electricity. Jewish engineer Pinhas Rutenberg laid out plans in 1920 to build reservoirs and hydroelectric power stations along the Jordan River in order to provide water for irrigating both sides of the river and to generate electricity to supply Palestine’s “main centers of consumption of energy—that is, Jaffa, Haifa and

¹⁵Quoted in Committee on the Exercise of the Inalienable Rights of the Palestinian People, “Water Resources of the Occupied Palestinian Territory,” 1992, in UNISPAL, New York: United Nations, URL: <http://unispal.un.org/UNISPAL.NSF/0/296EE705038AC9FC852561170067E05F> (accessed Sept. 30, 2010).

¹⁶Wadia, see n. 5.

Jerusalem.”¹⁷ By 1922, American Jews had pledged \$1 million to fund Rutenberg’s project. Although Rutenberg’s plans stalled initially, he received concessions from the British Government and assurances that he would be allowed to exploit all the waters of western Palestine.¹⁸ The Palestine Electric Corporation that he founded exercised, as Rouyer put it, “a virtual monopoly over much of the Jordan basin river system.”¹⁹

It soon became clear to the Arabs of Palestine that Britain’s policies would not necessarily favor or benefit them. Article 11 of the Mandate for Palestine allows for the Jewish agency to “construct or operate . . . any public works, services and utilities, and to develop any of the natural resources of the country.”²⁰ No clause in the document referenced development by any Arab Palestinian agency or corporation. The primary recipients of the water and electricity Rutenberg’s company produced were, of course, Jews living in Palestine. Arab Palestinians had to build their own networks or remain without these services.

The latter was true in Zababdeh. People in the village were too poor to raise money to build a water network. The closest they seemed to get to a municipal water system was a “business” one family, a relatively wealthy one by Zababdeh’s standards, created in the 1930s that used a few camels to carry water from the mountains to the village to sell. This system lasted only until some jealous villagers,

¹⁷“\$1,000,000 Pledged to Harness Jordan; Rutenberg Engineering Project Aimed to Furnish Power for Palestine. Jews Here Contributing; Justice Brandeis Gives \$25,000-- Light, Railway and Irrigation Plans,” *New York Times* (25 June 1922), URL: http://query.nytimes.com/mem/archive-free/pdf?_r=1&res=9405EEDE1E3FE432A25756C2A9609C946395D6CF (accessed Jan. 18, 2010).

¹⁸Arnon Soffer, *Rivers of Fire: The Conflict over Water in the Middle East* (Lanham, MD: Rowman & Littlefield Publishers, Inc., 1999), 155. Soffer claims that Rutenberg’s initial plan failed because it required French-British cooperation in the river basin; see also Shmuel Avitsur, “The Power Plant on Two Rivers,” 22 May 2003, Israel Ministry of Foreign Affairs, URL: http://www.mfa.gov.il/MFA/MFAArchive/2000_2009/2003/5/The%20Power%20Plant%20on%20Two%20Rivers (accessed Jan. 22, 2010).

¹⁹Alwyn R. Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict* (New York: St. Martin’s Press, 2000), 99.

²⁰League of Nations, “Mandate for Palestine,” see n. 12.

angry about paying for the water, shot the camels.²¹ The poor agrarian community could not afford to sustain a business of water-toting camels, let alone establish a complete water network from scratch. Instead, the people in Zababdeh continued their labor-intensive system of hauling the water themselves in clay jars from the cisterns in the mountains.

A Zababdeh woman named Fairuz commented that the British occupiers never “made anything for Zababdeh, just taxes.”²² The lack of any development projects in her village over the course of the Mandate indicated to Fairuz that, like the Ottomans, the British were mostly interested in the rural inhabitants of Palestine for taxes. Whatever taxes the villagers may have paid to the British government never reappeared in Zababdeh’s infrastructure. While Jewish communities, often funded by European or American donors, drank water from faucets in their houses and flooded their fields with irrigation water, and even some Palestinian cities managed to obtain municipal water networks, Zababdeh’s people dragged themselves back and forth from distant mountain cisterns.

The Jordanian Administration (1948-1967)

The years between the first Arab-Israeli war in 1948 and the Six Day War of 1967 saw a flood of hydrologic plans and proposals for the waters of Palestine. The tense political situation in the region meant that most of these plans were unilateral. Jordan and Israel each began work on plans centered on increasing the availability of water for irrigation. After the 1948 war, both countries experienced a sharp rise in population, Israel due to renewed Jewish immigration from around the world, and Jordan due to the influx of Palestinian refugees and the annexation of the West Bank. In the early 1950s, each of the two countries planned projects to

²¹Abu Jilal, interview with author (Zababdeh, West Bank, 8 June 2008).

²²Fairuz, interview with author (Zababdeh, West Bank, 15 June 2008).

dam or divert waters that fed the Jordan River.²³ Of course, Arab nations passionately opposed Israel's planned diversions of Jordan River water, and Israel felt equally threatened by the planned Arab projects.

Although Palestinians lived along practically the entire length of the river, the outcome of the 1948 war essentially left them without any rights to its waters. Consequently, they were excluded from the regional hydrologic plans. For example, negotiations for a proposal known as the Johnston Plan hosted representatives from Israel, Jordan, Syria, and Lebanon, but no representative from the stateless Palestinians.²⁴ Even after the Johnston negotiations collapsed, the Plan remained, particularly to Jordan and Israel, a framework for water sharing in the region. As architect of the plan, the United States was keen to see its success, despite its lack of official ratification by any of the involved parties. For several years, Israel and Jordan agreed to adhere to it in the hopes of obtaining financial support from the US.²⁵

According to the Plan's specifications, the waters of the Jordan River watershed were to be allocated as follows: 35 million cubic meters (MCM) to Lebanon, 132 MCM to Syria, and 720 MCM to Jordan, including from the groundwater within the watershed. All residual flow from the Upper Jordan, plus 25 MCM from the

²³Such plans included, in Jordan, the MacDonald Report and the Bunge Plan, and in Israel the All Israel Plan and the Israeli Seven-Year Plan. Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 110-112; Munther J. Haddadin, ed., *Water Resources in Jordan: Evolving Policies for Development, the Environment, and Conflict Resolution* (Washington, DC: Resources for the Future, 2006), 31; Joyce R. Starr and Daniel C. Stoll, eds., *The Politics of Scarcity: Water in the Middle East* (Boulder, CO: Westview Press, 1988), 43.

²⁴In 1953, the United Nations Relief Works Agency (UNRWA) asked the United States' Tennessee Valley Authority (TVA) to come up with a regional plan for the basin. The TVA, in turn, commissioned the project to American engineer Charles T. Main and his company, who put forth the Main Plan, or "Unified Plan" based on the studies and plans of the previous decade. A few months later, in October 1953, US President Eisenhower appointed Eric Johnston as a special envoy to conduct negotiations for a regional water sharing agreement amongst Jordan River riparians, based on Main's proposal.

²⁵K. David Hambricht, F. Jamil Ragep, and Joseph Ginat, eds., *Water in the Middle East: Cooperation and Technological Solutions in the Jordan Valley* (Norman, OK: University of Oklahoma Press, 2006), 39.

Yarmouk River, would go to Israel, estimated to total 400 MCM.²⁶ The water allocated to Jordan was meant to cover the large Palestinian population that was under that country's jurisdiction at the time, but no allowance was made with respect to a Palestinian state or any other autonomous Palestinian entity. It had to be distributed by the Jordanian government.

As might be expected, people in Zababdeh never saw any of the Jordan River waters allocated to the Kingdom of Jordan. Although Zababdeh was in the West Bank, its people noticed little change under Jordanian administration than from British rule. Fairuz's opinion of the Jordanian government resembled her opinion of the British: "Jordan didn't make anything for Zababdeh... Just for taxes, Jordanian and English, just for taxes. But for water, for electricity, something like that, no."²⁷ The Jordanian government, like the British, failed to sponsor the development of any infrastructure in Zababdeh, including a water network.

A Zababdeh woman I interviewed believed that the reason for Jordan's neglect was because the developments were not available to Jordanians either. She felt that since Jordanians were also Arabs, they would not have any more equipment or developments than people in Zababdeh. "If they have [it] in Jordan, they have it here."²⁸

Another explanation for the lack of water development in Zababdeh during this era could be that the Jordanian government was simply more interested in the Jordanian people than the influx of Palestinians. This sentiment was reflected by Nayem, a Zababdeh man that spent the first twenty years of his life under the Jordanian administration. Like Fairuz, he commented that "the Jordanians didn't make anything," for Zababdeh, or Palestinians in general.²⁹ He thought they were

²⁶Hambright, Ragep, and Ginat, see n. 25, 27.

²⁷Fairuz, see n. 22.

²⁸Jadda, interview by author (Zababdeh, West Bank, 1 June 2008).

²⁹Nayem, interview with author (Zababdeh, West Bank, 15 June 2008).

only interested in helping themselves.

Even though some in Zababdeh may have been critical of the Jordanian government's interests, many in Zababdeh still considered Jordan's administration preferable to Britain's. Wadia's impression was that the Jordanian government was excellent and never created problems for the Palestinians. Her family was able to export agricultural products such as melons, olive oil, beans, and peas to neighboring countries because the borders were open. The economy, and life in general, was better during the Jordanian era, in her opinion.³⁰ Miriam and Maria agreed that life was better then because the Jordanians built a police station, so the people were safer, and they created jobs by offering people positions in the army.³¹

However, Miriam and Maria also noted that "the Jordanians didn't make anything for water."³² Although there were a few perceived advantages to Jordan's administration in the West Bank, compared to the British that is, the people of Zababdeh continued to survive only on water stored in cisterns. Domestic water supply fell under the jurisdiction of local municipalities and town councils, as it had during the British Mandate.³³ This may help explain why many rural villages in the West Bank remained without water networks throughout the Jordanian era. The Jordanian government did not take responsibility for it, and Zababdeh's people were too poor to establish a network themselves.

³⁰Wadia, see n. 5.

³¹Miriam and Maria, interview with author (Zababdeh, West Bank, 16 June 2008).

³²Ibid.

³³Miriam and Maria, see n. 31, This tradition was made official under the Municipalities Law No. 29 of 1955; see also Palestinian Water Authority, "Water Law," URL: http://www.pwa.ps/en/index.php?option=com_content&view=article&id=51%3Awater-law&catid=39%3Alaw&showall=1 (accessed Jan. 18, 2010).

Israeli Occupation (1967-present)

The outcome of the 1967 Six Day War for the Palestinians was Israeli occupation of the West Bank and Gaza Strip. These were the remaining territories of Mandate Palestine that had been allocated for an Arab state in the 1947 UN Partition Plan, but not annexed by Israel after the 1948 war. This development transformed the character of the struggle for water in Palestine from a situation of neglect to one of restriction and domination.

Israel did not annex the West Bank as Jordan had done, but “occupied” it. As an occupied territory, the West Bank could not be subject to Israeli law, and Jordanian laws in place at the time of occupation were to remain in force.³⁴ Israel’s water law, which had been passed in 1959, essentially made all water resources public property to be managed and controlled by the state.³⁵ In order to extend this condition into the West Bank, along with Israeli policies on many other matters, Israel had to pass a series of laws, including over 2000 military orders.³⁶

Spearheading the water legislation was Israel Proclamation No. 2 of 1967, which declared the West Bank water resources as property of the State of Israel.³⁷ Alongside this proclamation came Israel Military Order No. 92 “Concerning Powers for the Purpose of the Water Provisions.”³⁸ Under this order, the Military

³⁴The Hague, “Convention (IV) respecting the Laws and Customs of War on Land and its annex: Regulations concerning the Laws and Customs of War on Land,” 18 October 1907, URL: <http://www.icrc.org/IHL.NSF/FULL/195?OpenDocument> (accessed Jan. 18, 2010). The Hague Convention of 1907, article 43 requires the occupant “to restore, and ensure, as far as possible, public order and safety, while respecting, unless absolutely prevented, the laws in force in the country.”

³⁵Civic, see n. 7, 446; Jeffrey D. Dillman, “Water Rights in the Occupied Territories,” *Journal of Palestine Studies* 19, no. 1 (Autumn 1989), URL: <http://www.jstor.org/stable/2537245> (accessed Oct. 18, 2010): 52.

³⁶Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 45.

³⁷Palestinian Water Authority, “Water Law,” see n. 33.

³⁸Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 46; “Israeli Military Order No. 92 Concerning Powers for the Purpose of the Water Provisions,” 15 August 1967, in Israel Law Resource Center, URL: <http://www.israellawresourcecenter.org/israelmilitaryorders/fulltext/mo0092.htm> (accessed Jan. 18, 2010).

Commander of the West Bank Area could appoint an “Officer in Charge” to hold definitive power in all water-related decision making for the territory. Any previously existing water provisions became null and void unless permitted to continue under the Officer in Charge’s directive.³⁹ For example, the Jerusalem Water Undertaking, a company established in 1966 by the Jordanian government to manage the water supply of the Ramallah and Al-Bireh area, was permitted to maintain all existent facilities under their control. However, the company had only been functioning one year at the time of the 1967 occupation, and the facilities in some areas of its jurisdiction were under construction. The Israeli Administration in the West Bank took control of the water facilities in these areas.⁴⁰

Military Order No. 158 placed all water production facilities under Israeli control and would require licenses for further construction or operation of water facilities.⁴¹ Those who owned water installations like wells prior to the Israeli occupation still had to apply for new licenses under this order.⁴² Additionally, No. 291 suspended and repealed aspects of Jordan’s Land and Water Settlement Law No. 40, allowing real estate transactions to take place for land or water for which the registration process had not yet been completed.⁴³ Subsequent military orders regarding agriculture and natural resources also reflected Israeli policies on water in the region.⁴⁴

³⁹See n. 38.

⁴⁰Engineer Bassam I.H. Sawalhi, Director of Operations Department at the Jerusalem Water Undertaking, interview with author (Ramallah, West Bank, 2 June 2008).

⁴¹Palestinian Water Authority, “Water Law,” see n. 33.

⁴²Raja Shehadeh, *Occupier’s Law: Israel and the West Bank* (Washington, DC: Institute for Palestine Studies, 1985), 152.

⁴³Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 47; “Israel Military Order No. 291 Concerning the Settlement of Disputes over Titles in Land and the Regulation of Water,” 19 December 1968, in Israel Law Resource Center, URL: <http://www.israellawresourcecenter.org/israelmilitaryorders/fulltext/mo0291.htm> (accessed Jan. 18, 2010); Palestinian Water Authority, “Water Law,” see n. 33.

⁴⁴See Military Order Nos. 457, 1002, 1015, and 1039, for example. Israel Law Resource Center, “Israeli Military Orders,” URL: <http://www.israellawresourcecenter.org/israelmilitaryorders/israelimilitaryorders.htm> (accessed Jan. 18, 2010).

Despite the restrictive legislation on water passed by the Israeli military, most of the people I interviewed in Zababdeh thought the period after the Israeli occupation was the most comfortable. Many new opportunities arose for Zababdeh inhabitants from 1967 through the 1970s and early 1980s. One of my interpreters described his perception of the economic situation in those years, when borders between the West Bank and Israel were open. He said that for twenty years his father and many other men and women from the village took a taxi nearly every day to Haifa, Nazareth, Jerusalem, Afula, or another place inside Israel to work. Some people hired out for temporary work, while others had regular jobs. “You see,” he said, “they had a good period [when] they had the money which they didn’t have before.”⁴⁵

With money flowing into Zababdeh like it never had before, other things began flowing in too. For the first time, people there saw tractors, generators, and even a water pump at long last. Several of my interviewees linked these new developments directly to the Israelis. In an interview with Fairuz, my translator, who was also her grandson, began to laugh and said, “My grandmother like Jewish so much. You know, because Israel, they came here, they make everything for Palestine, but especially for Zababdeh. They give electricity, they give it water, they kill the mosquitoes, she said that. When they came here, the life became better.”⁴⁶

One other very important development occurred during the 1970s. Zababdeh got a water network. For the first time, water could be carried from outside the village through pipes right into people’s homes. According to a municipality council member, the network was established by Oxfam in 1979.⁴⁷ My translator recounted:

⁴⁵Jadda, see n. 28.

⁴⁶Fairuz, see n. 22.

⁴⁷Abed, Zababdeh municipal council member, interview with author (Zababdeh, West Bank, 19 June 2008); Oxfam International, “About Us,” URL: <http://www.oxfam.org/en/about> (accessed Oct. 25, 2010). According to the website, “Oxfam is an international confederation of 14 organizations working together in 99 countries and with partners and allies around the world to find lasting solutions to poverty and injustice.”

“I remember these days, when I was ten years. And I remember when they started to put the pipes the first time, in Zababdeh. It’s in 70s, in 1978 or 1979. I remember when I was a little boy I was standing with them, [and they were] digging beside the street.”⁴⁸

Since Zababdeh had no well to provide water for the village, the water for the distribution network had to come from somewhere else.

Providing water to the West Bank was the responsibility of the West Bank Water Department. The WBWD delivered drinking water to municipalities and village councils for distribution to the Palestinian population. Established under the Natural Resource Authority of Jordan, the WBWD and all other civilian institutions in the West Bank initially fell under the authority of the Area Commander.⁴⁹ In 1981, certain powers of the Israeli military in the West Bank were transferred to Israel’s Civilian Administration for the occupied territories. In the Military Order establishing it, the Civilian Administration was tasked with

administer[ing] the civilian affairs in the region, in accordance with the directives of this order, for the well-being and good of the population and in order to supply and implement the public services, and taking into consideration the need to maintain an orderly administration and public order in the region.⁵⁰

The Civilian Administration was essentially created to handle non-military matters in the West Bank. Consequently, the Civilian Administration supervised the WBWD and water distribution in the West Bank.

Under the Civilian Administration, the WBWD had little power. It was responsible for delivering water throughout the West Bank, but had no

⁴⁸Jadda, see n. 28, comment by translator.

⁴⁹Shehadeh, see n. 42, 69.

⁵⁰“Israel Military Order No. 947 Concerning the Establishment of a Civilian Administration,” 8 November 1981, in Israel Law Resource Center, URL: <http://www.israellawresourcecenter.org/israelmilitaryorders/fulltext/mo0947.htm> (accessed Jan. 18, 2010).

decision-making abilities and did not participate in water planning.⁵¹ Although staffed by Palestinians, the WBWD still signified direct Israeli control over water resources and distribution.

The West Bank's municipalities and village councils lay under the thumb of the Israeli occupiers as well. These authorities were responsible for delivering water to the inhabitants within their jurisdiction, whether from water supplied by the WBWD, which had to be purchased (usually from Mekerot, the Israeli water company), or from the few wells they were permitted by the Israeli administration to retain after the occupation.⁵² Initially, Zababdeh's water came from one of these wells near a village called Arraba. Then in 1981, the Israeli government drilled a well on some land between Zababdeh and the nearby town of Qabatiya.⁵³ According to a farmer, Bilal, on whose land the Qabatiya well resided, it was drilled to supply the Israeli military camp on the outskirts of the village, as well as some Israeli settlements that had been built on the other side of Zababdeh.⁵⁴ Consequently, the pipes from this well carried water through Zababdeh, giving the villagers the opportunity to purchase water from a closer and more reliable source. "And what they have after they use, if they have more, they started to send it to the villages around here."⁵⁵

A few years before my 2008 interviews, the Israeli military deserted the camp. Bilal reported that until that time he was forbidden from coming to his land. He was not recompensed in any way for the use of his land or the water coming from

⁵¹Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 53.

⁵²*Ibid.*, 52.

⁵³Bilal, interview with author (Zababdeh, West Bank, 1 June 2008). Because most villages in the West Bank consist of a condensed built up area surrounded by agricultural land, the well was several kilometers outside the village but still part of Qabatiya territory.

⁵⁴Alad, interview with author (Zababdeh, West Bank, 19 June 2008); Bilal, see n. 53.

⁵⁵Bilal, see n. 53.

underneath it. He commented that he was the owner paying for water from his own land.⁵⁶

The supply of water to Zababdeh was not completely reliable. One interviewee remembered 1985 and 1986 to be especially dry years, so most of the water from the well was used by the Israelis before it could come to Zababdeh. Of course, the Israelis also often cut water to the village when people had not paid for it.⁵⁷ Especially during the years of the first intifada, from 1987 until 1993, the water to the village was often cut for days or weeks.⁵⁸ When water to the village was cut, people relied on their back-up cisterns that used to be their primary source of water. These dried up during the hot Palestine summers, at which time Zababdeh's inhabitants had to purchase the contaminated but very expensive water brought to the village in water tankers.

Although Zababdeh's inhabitants saw many improvements in their lives under Israeli administration, the occupiers were no saviors to the people of Zababdeh. One of my translators remarked, "Israel is a curse and a blessing in the same time, because [we are] getting better with money now, and a curse because it's an occupation."⁵⁹ When the borders were open between the West Bank and Israel, people could earn many times what they were used to.⁶⁰ However, the Israeli military could close the borders any time, and often did so, especially after the start of the intifada in 1987. Additionally, the Israeli government in the West Bank showed no more interest in developing water resources for Zababdeh than the British or Jordanians had. The water network that appeared during this era was

⁵⁶Bilal, see n. 53.

⁵⁷Alad, see n. 54.

⁵⁸Miriam and Maria, see n. 31.

⁵⁹Jadda, see n. 28.

⁶⁰My translator commented that with open borders people could earn 400 or 500 shekels a day, but 50 shekels a day when the borders were closed. In 2008 the exchange rate for the Israeli Shekel, the currency used in the West Bank, was approximately 3.8 to one US dollar. See <http://www.x-rates.com/d/ILS/USD/hist2008.html> (accessed 25 October 2010).

not a development project by the Israeli military or the Civilian Administration, but came from an outside source.⁶¹ Because Israel controlled the source of water for this network, the water to Zababdeh could be cut any time at the discretion of the Israelis. The situation for Zababdeh's inhabitants consequently remained unstable.

Palestinian Authority (1995-present)

The peace negotiations of the early 1990s between Israel and Palestinian leaders brought the Palestinian struggle for water into the political discussion. The water issue made an appearance in the agreement known as Oslo I, under the principle of economic growth. This section of the peace accords called for the creation of a Palestinian water authority, among a list of other economy-related authorities. Also, the Israelis and Palestinians agreed to cooperate on economic issues, including water. Experts from both sides would create a Water Development Program comprised of "proposals for studies and plans on water rights of each party, as well as on the equitable utilization of joint water resources for implementation in and beyond the interim period."⁶² This clause demonstrates only one of the many issues in the document over which the two parties were not prepared or willing to sign a specific agreement. No rights were actually defined; instead, the document only called for "studies and plans" on the matter. This situation characterized the era of the Palestinian Authority's administration in the West Bank until the present day.

Palestinian and Israeli negotiators debated the issues of Oslo I for another two years before signing the Interim Agreement on the West Bank and the Gaza Strip,

⁶¹ Another example of a municipal service brought to Zababdeh was electricity. A man referred to by several interviewees, an Italian called Priest Dominic, came to the village because of the Christian presence there, acquired a generator to supply electricity to the village. Again, the infrastructure development was not government-sponsored but came from an international organization's charitable donation to the village.

⁶² "Declaration of Principles on Interim Self-Government Arrangements," 12 September 1993, Washington, DC, URL: http://www.pwa.ps/en/index.php?option=com_content&view=article&id=70:oslo&catid=42:water-agreements&Itemid=59 (accessed Jan. 12, 2010), in "Annex III."

known as Oslo II, on 28 September 1995. By this time, (limited) control of Jericho and the Gaza Strip had been turned over to the Palestinians, and members of the Palestinian Authority (PA) were sworn in to govern them.⁶³ Part of the “civil powers and responsibilities” transferred to the Palestinian Authority in certain areas of the West Bank under the terms of Oslo II included, as explained in Article 40 of Annex 5, “powers and responsibilities in the sphere of water and sewage in the West Bank related solely to Palestinians.”⁶⁴ Under this clause, the Palestinians were granted the authority to manage their own water resources, those within the areas now under direct PA administration. The Palestinian Water Authority (PWA) was established in 1995, a commissioner was appointed to handle water management for the Palestinians, and Palestinians and Israelis agreed to share water data with one another.⁶⁵

Water problems in Zababdeh did not disappear with the creation of the PWA, though. The village continued to get its water from the Qabatiya well, which was owned by Israel’s water company Mekorot.⁶⁶ Zababdeh’s water supply from the well continued to be cut for long periods of time, especially in the summer when the water table was lower and the well less productive. People in the village often had to purchase tanks of water brought from other places.⁶⁷

⁶³Bickerton and Klausner, see n. 4, 282.

⁶⁴“Israeli-Palestinian Interim Agreement on the West Bank and the Gaza Strip,” 28 September 1995, Washington, DC, URL: http://www.pwa.ps/en/index.php?option=com_content&view=article&id=72:article-40&catid=42:water-agreements&Itemid=59 (accessed Oct. 12, 2010), under “Article 40: Water and Sewage.”

⁶⁵The PWA was created to handle existing water systems in the Occupied Palestinian Territories (OPT) that served solely Palestinian people. A Presidential Decree in 1995 brought the PWA into being, and a law in 1996 defined its purpose. The National Water Council makes the policies for the OPT, and the PWA carries them out. See Palestinian Water Authority, “FAQ’s PWA,” URL: http://www.pwa.ps/en/index.php?option=com_content&view=article&id=77:pwafaq&catid=31:general&Itemid=46 (accessed Jan. 18, 2010); Rouyer, *Turning Water into Politics: The Water Issue in the Palestinian-Israeli Conflict*, see n. 19, 200-201, 217.

⁶⁶Ihab Bargouthi, Palestinian Water Department, interview with author (Ramallah, West Bank, 19 June 2008), Mekorot supplies Israel with the majority of the water it consumes and also sells water to many Palestinian water utilities and municipalities, including, for many years, Zababdeh.

⁶⁷Nayem, see n. 29; Silwa, interview with author (Zababdeh, West Bank, 19 June 2008).

When the soldiers at the Israeli military camp outside Zababdeh were redeployed, the Qabatiya well was turned over to the PWA. It was reportedly in a dismal condition, the pump under disrepair and the water table almost too low to pump from anymore. When I visited the location of the well, Bilal told me it stopped working in 2006. A new one was being built adjacent to the old one, but was awaiting funding from international donors (at least one million dollars, according to Bilal) before it could supply water to the region again.⁶⁸

In the meantime, Zababdeh's water supply was coming from the Arraba well approximately eleven kilometers away. According to a municipality council member named Abed, water from the Arraba well only came to Zababdeh after it provided for all the villages in its own area.⁶⁹ Consequently, the people in Zababdeh still suffered periods of days or weeks without water. Moreover, when water did reach the Zababdeh water network, oftentimes the pressure was too low to reach all areas of the village. One woman told me that her house, which was on a mountain in Zababdeh, never got water from the network because the pressure was low. "So without the water, they pump the air inside the pipe. So when the air comes, the counter receives just air."⁷⁰ Abed reported that many people complained to the municipality about this problem. The municipality would tell them they could either pay their bill even if all they received was air, or they could cut off their service from the municipality, which was very expensive to start again. Abed admitted that the total amount in bills from Zababdeh inhabitants was more than the bill the municipality received from the PWA.⁷¹

A more reliable water source than the defunct Qabatiya well or the

⁶⁸Bilal, see n. 53.

⁶⁹Abed, Zababdeh municipal council member, interview with author (Zababdeh, West Bank, 19 June 2008).

⁷⁰Alad, see n. 54, comment by a relative.

⁷¹Abed, see n. 69.

over-committed Arraba well might have solved the water problems of Zababdeh's people and municipality. However, money to drill or repair a well was not the only stumbling block they faced. A limiting factor of the transfer of authority to Palestinians under Oslo II lay in the "coordination" called for in the agreement. An equal number of representatives from the Palestinians and the Israelis were to form the Joint Water Committee (JWC). Under this principal of the agreement, all decisions regarding water and sewage had to be reached by consensus of the JWC, meaning both Palestinians and Israelis had to sign off on them. The types of decisions included approval for drilling new wells or increasing pumping level from a water source, as well as decreasing extraction from a source, and construction or modification of water or sewage infrastructure. Decisions by the JWC would be enforced by a number of Joint Supervision and Enforcement Teams (JSETs), each composed of at least two personnel from each side.⁷²

In a practical sense, this joint approval required for any water projects meant that despite the degree of autonomy granted to the Palestinians on the issue, the Israeli government could still prevent the legal development of water resources by Palestinians. Indeed, most of the wells drilled after 1995 were shallow illegal wells.⁷³ These are always at risk of being closed off by Israel and the Palestinian Authority. One of my translators believed that deeper wells were even more disconcerting to Israel. He said, "You know why it's not allowed to dig deeper than Israel? Because if you dig deeper than Israel, you will draw all the water from them."⁷⁴ To him, Israel prevented the Palestinians from drilling deeper, more productive wells because it would decrease the amount of water available to Israelis.

⁷²See n. 64.

⁷³Bargouthi, see n. 66.

⁷⁴Silwa, see n. 67.

Conclusion

The agreement signed in 1995 represented monumental progress in negotiating peace in the Palestinian-Israeli conflict and opened the door to a realization of Palestinian water rights. However, just as the rest of the interim agreement was laced with the phrase “except for the issues that will be negotiated in the permanent status negotiations,” the final details of the water issue were left for later negotiations. While the first principle of Article 40 indicates Israel’s recognition that the Palestinians do indeed have water rights, it omits an explanation of what those rights are, instead leaving the matter for the permanent status negotiations. The next few years saw a breakdown in the peace process. Few compromises were reached after the Interim Agreement, and despite numerous efforts to settle them, the more sensitive issues left out of the earlier accord have not been resolved. Distrust between the two sides in the dispute heightened with each new failed attempt at a solution. The final status issues, including the highly contentious water problem, have proven very stubborn obstacles to peace.

The Palestinians are now in a very weak negotiating position with regards to water. This weak position can be traced to their history of non-involvement with the issue. While the British Mandate era in Palestine saw numerous efforts by the Zionists to secure water resources for a future state, the Palestinian Arabs made few attempts, and consequently little progress, in acquiring more water for their population than rainfall. A generally rural and relatively poor group of people, the Palestinians lacked the capital and the technical expertise that the Jewish colonists had access to, not to mention the political influence with the British government. While the West Bank was an annexed territory of Jordan, no plans were made to allocate water to a future Palestinian state. People in Zababdeh indicated they thought the Jordanian government was primarily interested in Jordanians. The

Israeli administration in the West Bank placed strict regulations on Palestinian development of water resources, preventing villages like Zababdeh from improving their water situation themselves.

While the Oslo Accords allowed for the establishment of a water authority in Palestine, the Palestinian government must still pass all plans and decisions under Israeli scrutiny for final approval. Moreover, the two sides of the Palestinian-Israeli conflict have thus far been unable to agree upon the water rights of the Palestinian people and what resources should be reserved for them. Although water has finally taken its place with the other issues crucial to the future of a Palestinian state, the Palestinians remain displaced from the policy and decision making regarding the scarce resource.

Chapter 4

The Absence of Water Wars in Palestine

Introduction

As access to clean water has increasingly become a problem for people in the world, the argument that conflicts will be fought over the resource seems more and more plausible. The land of Palestine is often a prominent subject for predictions of looming water wars, although evidence of such wars and their likelihood in the future has been widely debated. This chapter offers an explanation for the absence of violent conflict over water in Palestine by exploring the water history in Zababdeh, the history of the village's struggle throughout the 20th century to acquire water for the people's basic needs. The inhabitants of Zababdeh experienced drastic improvements to the ways they accessed and used water under Israeli occupation, compared to the years before it, leaving them little incentive to fight over the resource. But as the older generations in the village age and pass on, the younger generations that grew up under the occupation see injustice and inequality in the water distribution in the West Bank.

Water Wars Theory

Of the wars fought as part of the Palestinian-Israeli conflict, none can be classified exclusively as "water wars." John Cooley asserts that a struggle for water was "a principal cause" of the Six Day War in 1967. In the mid-1960s, Arab governments laid plans to divert waters of the Jordan River in response to the

construction of the Israeli National Water Carrier. Israel responded to the plans with an airstrike at the diversion site.¹ While the incident very likely contributed to the 1967 war, it was not, in and of itself, a war. Similarly, Hussein Amery supported the claim that water scarcity was a reason for the first *intifada*.² Again, water is not the primary cause of the conflict, but according to the author, it is a contributing factor. These are two of the few instances in which water is directly associated with a war in Palestine, though it is still not the primary cause for war.

All other points of tension over water in these articles, as well as a similar article by Joyce Starr,³ are treated as *potential* sources of violent conflict. After describing some of the tension between Israel and its neighbors regarding the region's rivers, attributing most of the blame to Israel for diverting Jordan River water, Cooley called for Israel to publicly declare to its Arab neighbors that it does not intend to seize their water. In turn the Arab countries must offer "assurances" to Israel, while the United States should firmly stick to its policies of interstate cooperation over water in the region in order to avoid a "new war over Mideast resources."⁴ Amery analyzed an incident between Israel and Lebanon that "almost prompted military blows."⁵ In 2001, Lebanon began building a pumping station on a little spring that fed one of the upper tributaries of the Jordan River, which met with a "certain public hysteria" in Israel.⁶ Although the incident did not actually lead to military action, Amery also warned that, in the absence of cooperative action, a violent conflict could ensue. A large section of Starr's article on Middle East water wars

¹John K. Cooley, "The War over Water," *Foreign Policy*, no. 54 (Spring 1984), URL: <http://www.jstor.org/stable/1148352> (accessed Oct. 18, 2010): 15-16.

²Hussein A. Amery, "Water Wars in the Middle East: A Looming Threat," *The Geographical Journal* 168, no. 4 (December 2002), URL: <http://www.jstor.org/stable/3451474> (accessed Oct. 18, 2010): 314.

³Joyce R. Starr, "Water Wars," *Foreign Policy* 82 (Spring 1991): 17-36, URL: <http://www.jstor.org/stable/1148639> (accessed Oct. 18, 2010).

⁴Cooley, see n. 1, 6, 26.

⁵Amery, see n. 2, 321.

⁶*Ibid.*, 318.

focused on Palestine, specifically the dispute over water resources between the state of Israel and the Palestinians. She warned that the failure to solve the problem of water scarcity would preclude final peace agreements.⁷

A major concern, according to Starr, is the allocation of water between Israelis and Palestinians. In 1991, Israel stretched its water resources 15-20% beyond the natural replenishment rate. Most of the water extracted went toward agriculture. While Israeli agriculture drains the aquifers and river in the region, Palestinians are refused sufficient water for agriculture. The Palestinians pump some water from wells (though only pre-1967 ones) and purchase water from Israel. This water is almost solely for Palestinian domestic, and some industrial, use, which combined is less per capita than the domestic use of anyone living in Israel. Additionally, Starr points out that the Palestinians have no decision-making power over water resources.⁸

Yet Starr, like Cooley and Amery, only warns of the potential for the “critical situation” to erupt. Despite the clearly frustrating and inequitable situation the Palestinians are in, little if any violence has resulted. A look at the history of Palestinian water access and usage in the village of Zababdeh gives some explanation for why the clearly sensitive and volatile issue has not become a driver of the conflict.

Zababdeh’s Water History

For centuries, methods of water collection in Palestine, particularly the mountain region, consisted largely only of storing rainwater in cisterns. The tradition of collecting winter rains to sustain people through the dry summer season continued with seemingly little change through to the 20th century. Cisterns dug

⁷Starr, see n. 3, 26,36.

⁸Ibid., 24-26.

during the British Mandate era often were dug by the same backbreaking manual labor that had been used in ancient times.⁹ A man in Zababdeh, Abu Jilal, described hewing a cistern in the limestone rock using only “simple tools,” remembering his father carrying stones from the cistern on his back. He explained the pulley system they used to remove these large stones:

They were digging this [cistern]... they were making a wood-like circle, making the rope going around it while they are pulling the soil, or the rocks from inside the [cistern], to take them out... They [took] three months to dig the well, the whole summer to finish the well...¹⁰

The digging of cisterns was often a communal effort, involving the whole family or even multiple families working together to dig cisterns big enough to store water for their families all summer long.¹¹

Cisterns initially were built on family-owned land several kilometers from the village, far from the filthy streets of the village (see figure 4.1). The families that owned these cisterns regularly cleaned them very thoroughly in the fall, just before the rainy season. They cleared any debris from the area around the cistern and sometimes put lime around the area to keep it clean.¹²

The women of the villages typically collected water for their families, hiking up the hills to draw water from the cisterns. This incessant task had to be performed every day, sometimes multiple times a day. A Zababdeh woman, Rosa, remarked that three trips to the cistern would suffice her family of four children plus two parents for one day.¹³ Old and young women, responsible for bringing the water, balanced large clay jars on their heads, gliding along with incredible skill. The

⁹Professor Salah Al-Houdalieh of Al-Quds University, interview with author (Abu Dis, West Bank, 18 June 2008).

¹⁰Abu Jilal, interview with author (Zababdeh, West Bank, 8 June 2008).

¹¹Jadda, interview by author (Zababdeh, West Bank, 1 June 2008).

¹²Al-Houdalieh, see n. 9.

¹³Rosa and Saliba, interview with author (Zababdeh, West Bank, 19 June 2008).



Fig. 4.1: A mountain cistern in the West Bank near Qalqilya, like those in the mountains of Zababdeh.

water was drawn from the cistern in buckets and poured into the jars, like the one in figure 4.2, used for transporting and storing the water in people's homes. Two or three related families usually shared a cistern built on their lands. Women had to walk to the particular cistern owned by their families, often several kilometers from their homes and at the top of big hills.¹⁴

After the effort exerted for just one of these bottles of water, it was something to be handled carefully and in moderation. Abu Jilal commented:

¹⁴Jadda, see n. 11.



Fig. 4.2: A Zababdeh woman with a jar formerly used to carry water from the mountain cisterns.

[I] never washed [my] face with clean water until [I] reached twenty years old. . . [We] don't want to waste the clean water [for washing], so [I] was using the dirty water for the animals. . . that's what [I] was using to wash [my] face.¹⁵

No drop of the clean mountain rainwater could be wasted for even such an ordinary task as washing one's face. Each drop had to be carefully guarded. Even Abu Jilal remembered his father sleeping sometimes near their cistern to prevent women from other families coming to take water because their cistern was closer to the village.¹⁶ For everyone in Zababdeh and many rural parts of Palestine, water was a central focus of their day, as they labored to acquire enough of it for survival.

¹⁵ Abu Jilal, see n. 10.

¹⁶ Ibid.

Although Palestinians built very large cisterns meant to store water for the entire year, sometimes after several months of the hot Palestine summers, the cisterns went dry. At such times, many women would have to wander in search of more water.¹⁷

An eighty-one year old Zababdeh woman named Fairuz recalled a summer when she was thirteen or fourteen years old and she went with some other girls to collect water from a cistern. When the bucket came out of the cistern empty, the girls tied a rope around Fairuz's body and lowered her into the dark shaft. She reached the bottom only to discover that it was indeed dry. Similarly, they checked twelve more cisterns nearby, with the same result. Because it did not rain for another one or two months, the girls then had to travel thirteen or fourteen kilometers to the city of Jenin in search of water.

Other Zababdeh women had similar experiences. Sharif remembered going with her family from village to village in search of water. In one village, they had an argument with the townspeople over water and had to go many kilometers farther before they found water.¹⁸ Hani related an instance when she arrived at the cistern, but because many other people had just drawn from it, she found it empty. So she went with some neighbors to a nearby village to take water from a large cistern owned by a very rich man. For some reason, the man refused to let Hani draw water from his cistern, and she went home empty-handed. That night, to her good fortune, it rained.¹⁹

Often if all the cisterns in the nearby villages became dry, women had to walk many miles farther in search of springs. Though springs became less productive as the summer wore on, they typically provided water longer and more consistently than the cisterns. Cisterns rely directly on the previous rainy season for

¹⁷Fairuz, interview with author (Zababdeh, West Bank, 15 June 2008).

¹⁸Sharif, interview with author (Zababdeh, West Bank, 15 June 2008).

¹⁹Hani, interview with author (Zababdeh, West Bank, 17 June 2008).

replenishment. But spring water emerges from the underground aquifers that store water from many rainy seasons. Several years of low rainfall certainly affect spring flow, since the aquifers also regenerate from precipitation that seeps into them. While the flow of a spring can greatly decrease after a few dry years, or the spring might even dry up, nevertheless, in general most springs continue to flow when the cisterns have been desiccated.

Fairuz and Sharif both recalled trekking the thirteen or so kilometers to Jenin in search of its plentiful springs. Sharif recounted:

[We] would go, like, groups of people, and [we] took donkeys with [us]. And [we] were holding [the jars on our] heads and hands [in order to bring water back here], just for drinking. And that lasts for two days. And [we] have to go the next day to search again.²⁰

In drought years, Zababdeh and other similar villages of the northern West Bank were obliged to search out the springs of other cities and villages like Jenin, Qabatiya, and Nablus. Though normally only the women hiked the one or two kilometers to the cisterns in the hills, a dry year might require the entire family to walk fifteen kilometers to gather as much water as possible from a spring.

The water collected from the springs and cisterns provided nearly the entire domestic water supply for rural Palestine.²¹ After the toil put into acquiring a few liters of water, it is little wonder water was used by Palestinians almost solely for domestic purposes during the early 20th century.

Despite the British Administration's plans and intentions for development in Palestine, little changed for the Palestinians throughout the entire Mandate Era. While Palestinians had begun to be exposed to unfamiliar technologies and

²⁰Sharif, see n. 18.

²¹For rural population statistics, see Justin McCarthy, *The Population of Palestine: Population History and Statistics of the Late Ottoman Period and the Mandate* (New York: Columbia University Press, 1990), 155.

materials during this era, the rural people often were too poor to buy any of it. Fairuz recalled moving from Zababdeh to the nearby city of Jenin in 1959, remarking that all the houses had “taps,” indoor plumbing, in the city. “Because Jenin was a city,” she said, “so they had the water there continuously, and the bathroom was inside the house. But in Zababdeh, no.” The little village remained without such amenities.

However, the end of the Mandate era through the Jordanian period saw the advent of concrete in many Zababdeh homes instead of the “mud” used before. This development brought a remarkable innovation: cisterns below the houses (see figure 4.3). Though the concept itself was not entirely new, the purpose for which these cisterns were used changed. During the decades before, any cisterns found within the village, in the streets, next to or inside houses, only fed livestock. Saliba and his wife Rosa recounted: “The water for animals and for [cleaning] the houses [was in cisterns] here inside the house. And you know because the water came for this [cistern] from the street, it was so dirty.”²² Because the streets of Zababdeh were only dirt paths and the houses were made from clay before the 1950s, any water that drained into the cisterns of the village was filthy.

With concrete houses, and consequently concrete cisterns, people could store drinking water right inside their houses. Abu Jilal said:

So [we] knew about concrete. . . We started to make our roofs and the ceiling from concrete. Now it’s clean, it’s not of mud or something like that. Now it’s clean, and [we] started also to make the [cisterns] inside from concrete to keep the water clean. . . Every four years [we] were cleaning the [cistern]. . . because when [winter comes], [we] have to store the clean water inside.²³

²²Rosa and Saliba, see n. 13.

²³Abu Jilal, see n. 10.



Fig. 4.3: Concrete cisterns like this one have been built to store rainwater under houses in Zababdeh since the 1950s.

Some of my interviewees explained that the transition to cisterns below their houses occurred specifically after 1948 because refugees from the first Arab-Israeli war passed through Zababdeh and often washed their clothes in the mountain cisterns, contaminating the water.²⁴ Once the cisterns were under the houses, rainwater collected on the concrete rooftops that tilted slightly toward pipes leading to the cisterns where it could be stored. Before the rainy season, families had to clean any debris from the roof catchment area, and they scrubbed the cisterns so the water would be as clean as possible.

²⁴Jadda, see n. 11; Ashraf, interview with author (Zababdeh, West Bank, 3 June 2008), comment from Abu Ashraf.

The daily trek to the mountains Zababdeh women used to make became a thing of the past. Once the houses in Zababdeh could store clean water, the cisterns that dotted the surrounding hills became merely back-ups. Still, the system of drawing the water out by a rope and bucket remained. A Zababdeh man named Nayem described his house during the 1950s and 1960s, with a jug in the corner keeping the water drawn from the cistern cool if they wanted a drink. “And the place for a bathroom was far away, but it was just a hole in the ground, and [there was] no water.”²⁵ One of my translators, noting that he was born in 1969, remembered drawing water from his family cistern using a rope and bucket.²⁶ Although an important step, the concrete houses with indoor cisterns were only a small development that did little to ameliorate the overall problem of water scarcity in the village.

The big changes in Zababdeh came during the 1970s, after the West Bank had fallen under Israeli occupation. Even more technologies appeared in the village. Zababdeh saw electricity for the first time in the early 1970s when an Italian priest coordinated with some European organizations to establish a network there.²⁷ Farmers began using tractors and other farm equipment, finally able to purchase such things because they made more money selling to the Israelis than they had before.²⁸ People also purchased small pumps to pump water from their cisterns to tanks on the roofs of their houses (see figure 4.4), so it could then come out of the new taps they also installed in their houses.²⁹

During this time, as Fairuz commented, “water comes from two sources: from raining, on the roof and down the pipes to the [cistern], and the second sources is

²⁵Nayem, interview with author (Zababdeh, West Bank, 15 June 2008).

²⁶Jadda, see n. 11.

²⁷Rosa and Saliba, see n. 13; Hani, see n. 19.

²⁸Alad, interview with author (Zababdeh, West Bank, 19 June 2008); Jadda, see n. 11.

²⁹Jadda, see n. 11.



Fig. 4.4: Rooftop water storage tanks on top of an apartment building in Nablus.

from tanks.”³⁰ When the cisterns that collected rain from the roofs of houses dried up, people had to purchase water from other places, brought to the village in tractor-drawn water tankers like the one in figure 4.5.

Eventually, Zababdeh got a water network. Many lifestyle changes took place as a result of the water network. Other methods of acquiring water were labor-intensive and costly. Only a short time before construction of the network, women had stopped going to the mountains for water. Instead, the water was collected on the roofs of cement houses and stored in cisterns underneath the houses, both of which had to be meticulously cleaned often. Additionally, the cisterns might dry up after a long, hot summer. In such a case, water was purchased from wells in

³⁰Fairuz, see n. 17.



Fig. 4.5: A water tanker used to bring water to Zababdeh from wells and springs in other cities and villages.

other villages and brought to Zababdeh in tankers. This was only a last resort because it was very expensive. The water pumped into the village through the network, however, proved much more affordable and required little, if any, effort.

Once the water coming into the village became cheaper and seemed more reliable, people in Zababdeh purchased amenities that had perhaps before seemed too expensive or wasteful to them. Many houses began to see showers, washing machines, and indoor toilets.³¹ As water became more accessible to the people of Zababdeh, their demand for it increased. Rosa commented, “We consume today per day like a month in the past.”³² The older generation, Rosa, Abu Jilal, Fairuz,

³¹Miriam and Maria, interview with author (Zababdeh, West Bank, 16 June 2008); Nayem, see n. 25.

³²Rosa and Saliba, see n. 13.

Sharif, and the others, saw many improvements to their quality of life during the Israeli occupation, and perhaps in no way more so than their water usage.

Whatever attitudes they have about the occupation, and even though it is debatable whether Israel's influence or involvement in the West Bank directly led to any of these improvements, they all agree that their day to day lives became easier after the occupation commenced.

However, not all of Zababdeh's inhabitants remember the time when water had to be hauled into their mud houses in jars. The younger people in the village grew up with showers and toilets in their houses. The comparisons they make are with what they observe in their lifetimes.

Although since the 1980s, water could be pumped directly to people's houses and purchased through their municipality for a relatively cheap price,³³ the network did not turn out quite like the people of Zababdeh had hoped. The Qabatiya well supplying the water to Zababdeh's network, shown in 4.6, like the Arraba well that supplied Zababdeh before it, did not exclusively serve the people of Zababdeh.

While it was more reliable than the water from far away in Arraba, Zababdeh only received water after the Qabatiya well had fed the military camp and any Israeli settlements that took water from it. In winter, when the water table was high, Zababdeh's network had water nearly every day. But in the summertime, the productivity of the well decreased and water to the village could be cut off for weeks. When the network water was cut, Zababdeh again had to rely on the water from their house cisterns or purchase water from tankers. Cistern water had to be carefully rationed in order to sustain a family through the summer. Often this meant fewer showers, or people might choose not to wash their clothes. While the situation may have been similar to a few years before when there was no water

³³Mayor of Zababdeh Municipality, interview with author (Zababdeh, West Bank, 15 June 2008).

network, it still led to serious hygiene problems. The water from the tankers, which cost at least three times as much as that from the network,³⁴ could also only be used sparingly. Besides being more expensive than the network water, it was also much dirtier, presenting even more health risks for Zababdeh.

One solution to these problems might have been to drill another well to supply Zababdeh. When the Israelis dug the Qabatiya well, people near Zababdeh had the opportunity to observe the technologies and processes used in drilling wells. Bilal, the man on whose land the Qabatiya well sits, explained how he built a drill using an old truck. Before the Israelis dug the well, he did not realize what lay below his lands. My translator commented, “They didn’t buy outside from Israel. No. They did it. People here are smart. They can do it.”³⁵

Several obstacles still stood in the way of the people in Zababdeh tapping into the aquifer water. Just as the land around Zababdeh was not well-suited to springs, any wells there had to be dug much deeper than even those in neighboring Qabatiya and would likely be much less productive. Once a well was drilled, it would need a pump and fuel to run that pump, a large expense for people of Zababdeh.

But the greatest obstacle to water acquisition were the Israeli restrictions on drilling wells and pumping from them. The Israeli Military Orders issued in 1967 and 1968 nationalized all water resources in the newly occupied territories, fixed pumping quotas, invalidated any previous water settlements, and established a strict permit system for any proposed drilling of new wells.³⁶ Such permits were rarely issued to Palestinians. In much of the West Bank, people drilled numerous illegal wells, which proved inefficient. According to Ihab Bargouthi at the

³⁴Abed, Zababdeh municipal council member, interview with author (Zababdeh, West Bank, 19 June 2008). While the specific prices he mentioned in the interview were current to 2008, the ratios would have been much the same twenty years earlier.

³⁵Bilal, interview with author (Zababdeh, West Bank, 1 June 2008).

³⁶Applied Research Institute-Jerusalem, from email correspondence with Jane Hilal, Water and Environment Research Chair (22 April 2008).



Fig. 4.6: The Qabatiya well, which has supplied water to Zababdeh's water network, though irregularly, since 1981.

Palestinian Water Authority (PWA), the Jenin area probably has around 130 illegal wells.³⁷ These are usually quite shallow, less than 100 meters compared to the sometimes 800-meter deep wells owned by the PWA. With so many unregulated wells pumping from the same aquifers, in addition to water pumped from the aquifer by Israeli companies, productivity of many wells has become very irregular due to fluctuations and decreasing levels in the water table. Consequently, the already inconsistent flow of water supplied through networks like Zababdeh's has only become more unreliable.

In the meantime, Zababdeh is growing, expanding more and more into the surrounding hills (see figure 4.7). On the rare occasions that the village's

³⁷Bilal, see n. 35.

municipality obtains water for its citizens, the pressure is often so low that the water cannot reach the higher elevations, so the new houses in the hills experience even more difficulty than the rest of the village in receiving water through the network.³⁸ Additionally, though the Oslo Accords of 1995 transferred ownership of the Qabatiya well to the Palestinian Authority, Zababdeh once again has had to purchase water from much more distant wells like Arraba to supply the network. In 2006, the Qabatiya well quit working, and the Palestinian Authority had to seek aid from European countries in order to repair it.³⁹ Water from Arraba seldom comes to Zababdeh in the pipes, leaving the people sometimes weeks without water in the network from their municipality. Once all the rainwater in their cisterns has been used, nearly all of the approximately 1,000 houses in Zababdeh must purchase filthy water from the tankers.

The Gap

The situation in Zababdeh and other Palestinian West Bank communities may be, and often is, compared with the perception of life in Israel or the West Bank Israeli settlements. Juxtaposing the lifestyle of Israelis with Palestinians has become a popular tool in arguing for Palestinian water rights. Alwyn Rouyer titled an article on the subject “Basic Needs vs. Swimming Pools” to highlight the severity of the gap.⁴⁰ Although numbers vary of exactly how much water the Israeli West Bank settlers consume, most sources agree that it is many times more than the West Bank Palestinians receive. One statistic put the settlers’ daily per capita consumption at 74 gallons and Palestinians at 18.5, compared to the World Health

³⁸Alad, see n. 28, comment by a relative.

³⁹Bilal, see n. 35; Abed, see n. 34.

⁴⁰Alwyn Rouyer, “Basic Needs vs. Swimming Pools: Water Inequality and the Palestinian-Israeli Conflict,” *Middle East Report*, no. 227 (Summer 2003): 2–7, URL: <http://www.jstor.org/stable/1559317> (accessed Oct. 18, 2010).



Fig. 4.7: Zababdeh sprawl. As Zababdeh's population grows, the houses spread farther and farther into the surrounding countryside.

Organization's minimum standard of 26.5.⁴¹

Israeli lifestyle with swimming pools, green lawns, and carwashes contrasts sharply with Palestinian water shortages just for drinking, bathing, and cleaning their houses. In 1995, an Israeli TV station aired a program depicting this contrast between the Jewish settlement of Kiryat Arba and the nearby Palestinian city of Hebron. The uproar in Israel proper prompted Prime Minister Yitzhak Rabin to order water to be trucked from the settlement to Hebron. The Washington Report on Middle East Affairs reported: "A total of 27 cubic meters of water were brought in, literally a drop in the bucket compared with the city's [Kiryat Arba's] daily

⁴¹William A. Orme Jr., "In West Bank, Water Is as Touchy as Land," *The New York Times* (15 July 2000), URL: <http://www.nytimes.com/2000/07/15/world/in-west-bank-water-is-as-touchy-as-land.html> (accessed Aug. 6, 2009).

consumption under normal conditions of 25,000 cubic meters of water per day.”⁴²

The inequitable distribution of water alone is not the sole problem that has plagued Palestinians in the occupied West Bank. Often the water reaching particularly small villages is of inferior quality. One woman from the village of Faqua, after her son became ill with chronic diarrhea, said, “I’m angry that my son is sick. The doctor says it’s because of the water. We buy it from outside. I don’t know where it comes from. I give it to my children even though I know it’s contaminated. What else can I do?”⁴³

Zababdeh suffers a similar situation when purchasing water from tankers, but sometimes the water that comes through pipes from the city is not much better. Abed, a city council member in Zababdeh, explained that when no water is flowing through the pipes, they begin to rust. Then when water again comes through the village network, it carries with it the rust particles into people’s faucets. To this, village resident Joseph responded jokingly, “Zababdeh is the only place you have to use a toothpick after drinking the water.”⁴⁴

Conclusion

The challenges the little village of Zababdeh faces today differ significantly from those it faced one hundred years ago, or even just fifty. Over the course of the 20th century, Zababdeh grew from a rather isolated little village of about 200 or 300 people in uneducated farming families to a community of nearly 4000 individuals, many of whom speak English, drive cars, and have satellite dishes on their roofs. Instead of sending all the village women to the mountains three or four times a day

⁴²Frank Collins, “Israeli Refusal to Yield Control of West Bank Water Forces Deferral of Issue,” *Washington Report on Middle East Affairs* (October/November 1995): 13,19.

⁴³Katya Adler, “Water shortages plague West Bank,” *BBC News* (7 July 2009), URL: http://news.bbc.co.uk/2/hi/middle_east/8141771.stm (accessed Mar. 6, 2010).

⁴⁴Abed, see n. 34, with comment from translator.

to tote water back home in large, awkward urns, people in Zababdeh now build huge cement cisterns below their houses and boast a water network system that reaches nearly every house.

However, many of the developments that improved the water situation in the village since the 1930s have essentially been canceled out by other changes that impeded the village's progress. Technologies that appeared in Zababdeh during the 1970s, sometimes through the generosity of international donors, including water pumps and the network established throughout the village, were quickly followed by washing machines, indoor toilets, and showers. All these new amenities increased water consumption by Zababdeh's inhabitants. As technology to drill wells became available to some rural Palestinians, they found their ability to drill was limited by the occupying government. The many wells that have been drilled and overexploited by both Palestinians and Israelis in the West Bank have lowered the water table, causing many springs to dry up and older wells to quit or decrease productivity.

Although lifestyles and technologies have changed, concern and stress over water have remained. The improvements in the lives of Zababdeh's people seem to have mitigated the potential for violent conflict over water in the village. However, the starkly evident consumption gap between Palestinians and Israelis can only heighten tensions between the two groups. The older generations of Zababdeh may recall the tedious and difficult lifestyles of their youth, but the younger generations' memories begin with Israeli occupation and restrictions on their water access and use. Their lifestyles have not been improving through the years of occupation and the injustice of their water situation has become increasingly apparent. Water wars may not have taken place in Palestine thus far, nor may they ever, but the tension surrounding the water issue will remain a barrier between Palestinians and Israelis, preventing peace, until the injustice has been righted.

Chapter 5

Conclusion

Understanding the water problem at the ground level in Palestine, in a case study like that of Zababdeh, can help people to understand why water has achieved recent prominence in the Palestinian-Israeli conflict and can help negotiators, water management experts, and policy-makers to devise solutions to the water problem in Palestine. The village's experience with water over the 20th century illustrates an underlying, and even sometimes an overt, stress that has been exacerbating conflict in Palestine for decades.

In Palestine, a naturally water-scarce region, water stress is inherent. Over thousands of years, the region's inhabitants adapted their lifestyles to the unique climate and geography of Palestine, developing methods of collecting, storing, and transporting water. The shifting political conditions during the latter half of the 20th century and an accompanying influx of technology altered the relationship between Zababdeh's inhabitants and their environment. The rather sudden and drastic change in their daily water habits created a disconnect between people and environment that ultimately has altered these people's perceptions of the role of water in their lives.

By the 1980s, Zababdeh's inhabitants were using water for more than merely drinking and cooking. As Rosa mentioned, "We consume [water] today per day like a month in the past."¹ People began using water to clean their houses, take regular showers, and wash their clothes in a washing machine. They no longer had to haul

¹Rosa [and Saliba], interview by author, Zababdeh, West Bank, 19 June 2008.

jars of water to their homes from far away places; it could come through pipes right into their kitchen taps. None of these things seem like opulence or luxury to many people in developed countries. Yet these amenities only became available in Zababdeh during the last thirty years.

I ascribe to the philosophy of a human right to water, that “all peoples, whatever their stage of development and their social and economic conditions, have the right to have access to drinking water in quantities and of a quality equal to their basic needs.”² For the Palestinians, this right was ignored for decades. None of the administrations in the West Bank prior to the 1990s looked at providing clean and safe water to Palestinian communities as a priority. The village of Zababdeh saw no government-sponsored water projects throughout the British Mandate, Jordanian administration, or Israeli occupation. Despite the creation of the Palestinian Water Authority in 1995, whose very existence is to manage Palestine’s water resources, many Palestinian communities like Zababdeh still lack a water supply “of good quality for personal consumption at costs they can afford.”³ The water in Zababdeh’s network has always been erratically delivered and of poor quality. When no water flows in the network, the people in Zababdeh have had to pay exorbitant prices for water to be trucked to the village in rusty tankers, or they have had to drink the unsanitary water from the cisterns under their houses. The explicit rights of the Palestinian people to regional water resources are unspecified, preventing Palestinians from improving the quantity and quality of water available to them. The problem continues to be a source of friction in Palestinian-Israeli

²United Nations Water Conference, *Water Development and Management: Proceedings of the United Nations Water Conference, Mar del Plata, Argentina, March 1977* (New York: Published for the United Nations by Pergamon Press, 1978).

³Palestinian Water Authority, URL: <http://www.pwa.ps/DesktopDefault.aspx?tabID=4126&mid=11876&lang=en&ModeID=0&PageID=18><http://www.pwa.ps/DesktopDefault.aspx?tabID=4126&mid=11876&lang=en&ModeID=0&PageID=18> (accessed Oct. 29, 2010), in “Policy and Strategy” under “About Us, Brief History.”

conflict negotiations.

Despite the absence of this basic right, Palestinians have remained relatively peaceful on the issue of water. The rapid changes in the last century have proved to be mostly improvements in the lives of people in Zababdeh. They had no incentive to fight about water when their water situation was improving.

The pattern of improvement seems to have stagnated, though. Zababdeh has a water network, people have taps in their houses, showers, and washing machines, but the water supply is, as previously mentioned, inconsistent, unsanitary and expensive. Water still has to be rationed and preserved for the long, hot summers. It cannot be used to help grow Zababdeh's economy because the people barely have enough for their homes. Just a few kilometers from the village, though, Israelis enjoy just the opposite: clean, cheap water that comes to their houses without interruption and feeds their crops and industry. The obvious inequality may not lead to violence, but it certainly engenders bitterness and enmity.

In chapter four I stopped just short of predicting, as so many other authors have done, future water wars in Palestine. Water may never be a driver of wars or uprisings in Palestine. Of the outstanding issues preventing resolution of the Palestinian-Israeli conflict, water may not be the most prominent or significant, even for the people of Zababdeh. Yet it is an indicator of the stifling situation in which they live. The desire Zababdeh's people most seem to hold is the ability to improve their lives. They want to live in stability, to have their needs met. They want to have water to cook with, to clean themselves and their homes, and to drink without making themselves sick.

How much water the Israelis consume does not actually matter. What matters is what the Palestinians do not have. They do not have stability, and their water needs are not met. Indeed, the history of Palestinians in the West Bank throughout

the 20th century has been of instability, falling under the administration of one after another foreign government, each with different rules and regulations, none of whom have served the interests of people in small communities like Zababdeh.

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Appendices

Appendix A

Interviewee Information

Unless otherwise noted, I recorded all interviews on a digital voice recorder and later transcribed them. Unless noted that the interview took place in English, all interviews were conducted with the assistance of one of two Arabic translators.

Zababdeh Interviews

Abed. *Interviewed June 1, 2008.*

Abed was a Zababdeh municipality council member since 2005 and teacher at a Zababdeh school. The interview took place in Abed's home and was conducted in English. One of my translators was present during the interview and contributed comments as well.

Abu Jilal. *Interviewed June 8, 2008.*

Born in 1926, Abu Jilal descended from one of the men who settled Zababdeh in the 1800s. My translator, who was a friend of one of Abu Jilal's sons, indicated that the family was a relatively wealthy one. The interview was conducted on the patio at Abu Jilal's home in one of the oldest neighborhoods of Zababdeh.

Alad. *Interviewed June 19, 2008.*

Alad was born in approximately 1921. He and his wife farmed their lands for nearly sixty years. His wife died in about 2006 and he retired from farming the following year. Alad's daughter, born about 1968, also contributed comments to the interview, as well as another female relative.

Ashraf. *Interviewed June 3, 2008.*

Ashraf had a masters degree in water engineering and had previously worked for the Palestinian Hydrology Group, a non-governmental organization concerned with water and environmental resources development. He was a Zababdeh native and the interview was conducted in his parents' home, with both parents present for portions of the interview. My discussion with Ashraf was conducted in English and involved a great deal of specialized information and statistics about water resources in the West Bank. At one point in the interview, I asked a question Ashraf thought his father would be able to better answer. After that I spent several minutes asking his father, whom I refer to as Abu Ashraf, born in 1948, questions about his memories of the water situation in Zababdeh when he was younger. Ashraf translated my questions and his father's answers.

Bilal. *Interviewed June 1, 2008.*

Bilal was a farmer who owned the land on which the Qabatiya well was dug. Another man, from the nearby city of Tubas, who worked doing maintenance on the well, was also present and made comments during the interview.

Fairuz. *Interviewed June 15, 2008.*

Fairuz was born in 1927 and was my translator's grandmother. Though a native resident of Zababdeh, she also lived in the city of Jenin for forty-eight years, from 1959 to 2007. The interview was conducted on the patio outside her home.

Hani. *Interviewed June 17, 2008.*

Hani was born in 1933 in Zababdeh to a family with only female siblings initially. Consequently, she indicated performing, as a youth, much of the farming labor boys usually did. The interview took place in her home with

her son and his wife present.

Jadda. *Interviewed June 1, 2008.*

Jadda was a Zababdeh woman born in 1925. She was a relative of one of my translators, who never used her name but sometimes referred to her simply as “my grandmother.” *Jadda* is the Arabic word for grandmother, so I use the term to refer to her throughout this thesis. Jadda lived in Zababdeh all her life, from the British Mandate to the Palestinian Authority era. Some of her family members were present for the interview, though they did not participate in the recorded conversation.

Majdi. *Interviewed June 8, 2008.*

Majdi was a Zababdeh municipality council member since 2005. During the interview, Majdi provided me with the 2007 report on Zababdeh’s water consumption. The interview took place in a municipality conference room in English. One of my translators and some other council members who spoke little English were also present.

Mayor of Zababdeh Municipality. *Interviewed June 15, 2008.*

The mayor was my translator’s uncle. Consequently, my translator only referred to him as “my uncle,” so I have no other name for him. The mayor had been in his position since an election in 2005. His mother was another interviewee, Fairuz, and his interview was conducted in her home immediately following her interview.

Miriam and Maria. *Interviewed June 16, 2008.*

Miriam was born in approximately 1936 and Maria was born about 1938.

The two women were sisters living together in the same house in which they were raised. The interview was conducted in their home and a friend of my translator was also present.

Nayem. *Interviewed June 15, 2008.*

Nayem was born in 1947. The interview was conducted in his home with a few of his family members present.

Naziha. *Interviewed June 17, 2008.*

Naziha was born and raised in Zababdeh but moved to Germany after she got married. After living in Germany forty years, they moved back to Zababdeh in 1998. One week after moving back, her husband died, and she had lived alone since then. The interview was conducted in her home.

Rosa and Saliba. *Interviewed June 19, 2008.*

Rosa was born in approximately 1934 and her husband, Saliba, about 1930. They both lived in Zababdeh their whole lives. A few relatives of Rosa and Saliba were also in attendance during the interview.

Sharif. *Interviewed June 15, 2008.*

Sharif was born in 1922. The interview took place in her home. She indicated that her family owned livestock when she was young. Her daughter, born in 1959, contributed some comments in the interview, and her grandson assisted my translator in explaining some of Sharif's stories.

Silwa. *Interviewed June 16, 2008.*

Silwa, born in 1926, was a 1948 Arab-Israeli War refugee from Bisan, a village near the Sea of Galilee in present-day Israel. After leaving her hometown, she lived in the city of Nablus a few years, then in Jordan a few years, and Jenin for nearly twenty years before coming with her son to Zababdeh in 1998. She explained that she and her husband moved to Nablus, Jordan, and Jenin in search of work. For a large portion of the interview, I asked questions of Silwa's son and his friend who drove a water tank in

Zababdeh. For this portion of the interview, my translator's friend, who also spoke proficient English, assisted in translating the comments.

Wadia. *Interviewed June 17, 2008.*

Wadia lived in Zababdeh her entire life. She was born in 1924. The interview took place on the patio outside her home and her daughter was present.

Professional Interviews

**Engineer Abd Al Mo'men Afana, Head of Water Division and
Director of Research Center, Qalqilya Municipality.**

Interviewed June 14, 2008.

The interview was conducted in Engineer Afana's office at the Qalqilya municipality building in Qalqilya, West Bank. A professor from the Arab American University at Jenin, who introduced me to Engineer Afana, was also present during the interview.

Ihab Barghothi, Palestinian Water Department.

Interviewed June 19, 2008.

The interview was conducted in Mr. Barghothi's office at the Palestinian Water Authority in Ramallah, West Bank.

Dr. Salah Al-Houdalieh, Department of Art, Al-Quds University.

Interviewed June 18, 2008.

The interview was conducted in Dr. Al-Houdalieh's office at Al-Quds University in Abu Dis, West Bank.

**Engineer Bassam I.H. Sawalhi, Director of Operations Department at
the Jerusalem Water Undertaking, the water distributor for the
Ramallah/Al-Bireh District.**

Interviewed June 2, 2008.

The interview was conducted in Engineer Sawalhi's office at the Jerusalem Water Undertaking in Ramallah, West Bank. A dean from Al-Quds, who introduced me to Engineer Sawalhi, was also present during the interview.

Appendix B

Sources for Documents

Many of the documents significant in the Palestinian-Israeli conflict have become available on the internet. A website dedicated to the conflict in Palestine, the United Nations Information System on the Question of Palestine (UNISPAL)¹ posts not just United Nations documents like the 1947 Partition Plan and Resolution 242 passed after the Six Day War, but also many other documents relevant to the situation, including the Balfour Declaration and Britain's White Papers for Palestine. The website offers the full text of these and other documents without any commentary, but notates those which are not UN documents. A few relevant documents I was unable to locate in UN websites may be found on the International Committee of the Red Cross website or the official website of the Palestinian Water Authority.

Some of the Israeli military orders regarding Israel's administration in the Occupied Palestinian Territories are available from the Israel Law Resource Center (ILRC).² The website offers little information about the organization itself aside from its goals:

1. To serve as a professional level resource for civil rights and human rights lawyers doing legal work in Israel and the Palestinian territories she occupies.

¹United Nations Information System on the Question of Palestine, in UNISPAL, URL: <http://unispal.un.org/unispal.nsf/home.htm> (accessed Oct. 25, 2010).

²Israel Law Resource Center, URL: <http://www.israellawresourcecenter.org> (accessed Jan. 18, 2010).

2. To provide primary and secondary source material for researchers and activists interested in civil rights and in fighting the legalized discrimination practiced by the State of Israel.
3. To provide educational materials for educators and the public interested in learning about and teaching about civil rights in the State of Israel and the territories she occupies.

While the website displays the full text of many (though not all) documents, some of the sources cited, including those for the military orders, are not themselves primary sources. Combined with the lack of any explanation about the ILRC's background or the people involved with the organization, the problem of the sources detracts from the legitimacy of the documents. However, the ILRC website is the only place I have been able to gain access to the full text of the Israeli military orders, and the text available complies with secondary descriptions of their content.